

Using a paper replica of a U.S.-built Tomahawk cruise missile, an estimated 5,000 people staged a demonstration Monday night in Tokyo against the proliferation of nuclear arms.

Anti-Missile Demonstrations Reveal Collapse of West German Consensus

By Henry Tanner

International Herald Tribune

BONN — West Germany may not be going either pacifist or neutralist, but fundamental changes are under way in the political makeup of the country, which by its geographic position is the front line — or the bridge, as West German politicians prefer to put it — between the West and East blocs.

Some of these changes were evident Saturday when many hundreds of thousands of West Germans took to the streets in five cities to demonstrate against NATO's planned deployment of 108 U.S. Pershing-2 missiles and, to a much lesser extent, against the East-West nuclear arms race in general.

Diplomats from Western countries agree that the West German national consensus on Western military

strategy and on West Germany's role in the alliance is breaking down, probably irrevocably so. As a result, U.S. policy in this key country will be immeasurably more difficult to conduct.

NEWS ANALYSIS

The West German national consensus has existed virtually since the end of World War II. The nature of the country's role in the North Atlantic Treaty Organization was not questioned and was hardly even discussed by the political parties, the labor unions or others. Now it is, and not only by the peace movement.

Increasingly, West Germans point out that they have a greater concentration of nuclear weapons on their soil than any other country. They add that these weapons are under U.S. control and that they have no power over how the weapons will be used.

It was Franz Josef Strauss, the conservative premier of Bavaria and staunch defender of NATO, who shocked Bonn a few weeks ago with a sudden suggestion that the West Germans should be given the "second key" to the nuclear weapons in their country.

In their debates, many West Germans also point out that they are the only country that has been asked to station the Pershing-2s, which because of their range and velocity are at the heart of the negotiations in Geneva. Four other nations — Britain, Italy, Belgium and the Netherlands — are to take only the slower and less controversial cruise missiles.

The central theme during the peace marches was that West Germany would be the first country to be destroyed in a nuclear war. "The Thirty Years' War killed half of all Germans, so will the first thirty seconds of the next war," read one sign at the rally in Bonn on Saturday.

A rising anti-Americanism is connected with this fear, and is stated both explicitly and by implication. U.S. diplomats have noted the trend and are worried about it. In the most emotional view, the Americans are seen no longer as protectors of West German security but as manipulators who would direct a nuclear war in Europe from a safe distance.

Reported remarks by President Ronald Reagan and others in his administration that a nuclear war was winnable and that it could conceivably be limited to Europe have contributed to this mood and have been duly exploited and magnified by those who had an interest in doing so.

It was Heinrich Böll, the writer and one of the fathers of the West German peace movement, who told the demonstrators Saturday that they should not forget the threat of the Soviet SS-20s and that the anti-nuclear campaign should not turn into a campaign against "foreigners" in West Germany. "I mean American diplomats, American soldiers, American journalists and American businessmen," he added. "I am not anti-American," said Mr. Böll on another occasion. He was taken prisoner by the Americans in the closing days of World War II, but said the U.S. victory "freed me and my family from German terror."

"Anti-Americanism" in various forms is expected to grow in West Germany as it is becoming clear to everybody, including the leaders of the peace movement, that the Pershing-2s will be deployed this fall despite the mass demonstrations.

Preparations for deployment are due to begin Nov. 22, immediately following a government policy declaration by Chancellor Helmut Kohl and a debate in the Bundestag, the lower house of parliament.

The peace movement thus has failed in its prime objective, and nobody can tell how its members will react.

The mixture of popular success reflected in the mass demonstrations and its political failure may prove

explosive, some politicians fear. They predict that the mass of demonstrators will stay at home, disappointed, but that a hard core will abandon nonviolence and try to invade the missile sites.

Others believe that the movement — having succeeded in mobilizing the masses and maintaining nonviolence — will now begin to look beyond the Pershing-2s and try to become an effective force for a balanced reduction of the East-West arms race. Those who have this hope are basing it largely on the influence that the Social Democratic Party is now trying to gain in the peace movement.

Politically, the appearance of former Chancellor Willy Brandt, the chairman of the Social Democratic Party, was clearly the most important event of the day Saturday.

The party leadership, which had been wavering, has decided to enter and if possible take over the peace movement. This is part of a calculated step to the left by the party which, during its last years in power, had been outmaneuvered by the Greens on its left and had lost touch with the rank and file of its own youth organization and the labor unions, as the March election showed.

Mr. Brandt, at the Bonn rally, came out against deployment of the Pershing-2s and for an extension of the Geneva talks. He called on the United States and the Soviet Union to negotiate first a freeze and then a reduction of nuclear arms.

But he also accused the Soviet Union of having destroyed the East-West military balance with its one-sided buildup of the SS-20. He said that East and West were separated by fundamental differences and that West Germany's place therefore was in the Western alliance. He called anti-Americanism "quatsch," a strong colloquial word for nonsense.

To this came an immediate answer from Petra Kelly, the spokeswoman of the Greens party. "To be against the missiles and in favor of NATO is absurd," she said from the same rostrum.

One line of division that has replaced the old national consensus on West Germany's international role was clearly brought into the open.

It runs between the hard-liners within the divided Greens, represented by Miss Kelly, who want to take West Germany out of the Western alliance, and Mr. Brandt and his supporters in the Social Democratic leadership, who want to stay in the alliance but call for more Western flexibility in dealing with the Russians.

The second line of division runs between the Social Democratic leadership around Mr. Brandt and the government coalition of Mr. Kohl. The separation came out clearly in a recent television debate between the second-ranking official in the Foreign Ministry, Alois Mertes, and Egon Bahr, the Social Democrats' disarmament expert.

Mr. Mertes defended the NATO concept of deterrence as the only salvation: Be strong first, negotiate later, otherwise we will be blackmailed by the Russians, he said in effect. His theme was "peace with freedom."

Mr. Bahr answered that peace had to be the first goal because without peace there could be no freedom, only joint destruction. He argued that deterrence alone was no longer enough because it could no longer prevent war and that ways had to be found to reduce East-West tensions and distrust and move from there to mutual disarmament.

This is the position expected to be taken by the majority of the Social Democrats at the party's congress two weeks from now. The party is seeking a new security concept, but what that will be is not yet clear.

When the day of mass demonstrations was over Saturday, a leading television commentator said it had been a "good day for Germany." Most West Germans probably agreed.

There is a widespread feeling that West German democracy has passed an important test.

Dissenters were able to state their views by the hundreds of thousands and take over entire city centers. There was civil disobedience in the attempted blockades of ministries and military bases, but no violence. The only violent clashes were provoked by "autonomous" extremists who are outside the peace movement.

The police handled the mass demonstrations with restraint and great skill, and not with an attitude of confrontation or repression.

Even Friedrich Zimmermann, the law-and-order interior minister who had rammed through the cabinet significant restrictions on the citizens' right to demonstrate, in expectation of a "hot autumn" of demonstrations, declared himself "happy" on Monday morning.

Suicide Driver 'Was Smiling' As His Truck Hit, Marine Says

By Don A. Schanche

Los Angeles Times Service

BEIRUT — The suicide driver of the truck carrying the bomb that demolished the U.S. Marine Corps headquarters building here Sunday was smiling as he crashed through the barricades in front of the structure, according to a young marine who escaped unharmed.

At nearby Marine offices, Lance Corporal Robert Calhoun, 21, of San Antonio, Texas, said he was behind sandbags on the roof of the four-story battalion headquarters when he heard "a roaring truck, and I heard something hit sandbags like a crash impact. Then I heard an explosion. Once the explosion went, sir, everything was going."

Facial muscles twitching involuntarily as he recalled the next devastating moments, the marine described how he and a friend literally rode the roof down as the building crumbled.

"Everything started falling and I was behind the sandbags on the roof, and stuff was falling, sir. I was praying to God, you know, I couldn't see it. I guess this is the way to go, because I didn't know what hit it."

"As soon as everything stopped, I waited about 20 more seconds because I thought it was incoming

artillery rounds. . . . I got up and my friend, Joe Martupci, was beside me."

"He was trapped. I unbuckled him and we got up and, as soon as we got off, you heard about a thousand people screaming, 'Help me, God help me.'"

"We got off the roof and started pulling people off. It didn't help. Couldn't get them, so we ran up here to try to get some help. It was too late."

Corporal Calhoun's voice cracked when reporters asked how many friends he had lost in the attack that killed more than 10 percent of the 1,600 U.S. marines in Lebanon.

"A bunch," he answered. "I only know of two that actually walked out of it alive with nothing wrong." His words faded as he added, "All my friends, a lot of my friends, just about all my friends."

Although Corporal Calhoun said that he had not seen the truck, he quoted another marine who was near the building entrance and later described to him the truck and its driver.

"The man was wearing green fatigues and driving a yellow truck and, as he went by him, he tried, he tried, he tried to pull out a magazine because it wasn't in his weap-

on — because we're not allowed to have them in the weapon . . . but by the time he got everything loaded, the man had already exploded the weapon."

"And there is nothing he could do. And, he says, just as the man went by, he says he'll always remember, the guy was smiling."

Asked if he was sorry he came to Lebanon, Corporal Calhoun replied: "I'm not sorry I came here. I'm just sorry that something like this happened. I think that we have to be here and I don't think that something like this should deter us from what we're doing."

"I'm mad, but how can you take it out on the people of Lebanon? See, we're already here. It seemed they had a cease-fire, but it seems like they got a new target — marines."

Reflecting on the tragedy, he continued: "It's a shame because I know a lot of people that just got married, had wives, had kids on the way. They were just saying we only have so many days left until we get to go back. You know we made over 100 days here already, over 150 already. Only a couple more and we'll be back in the States."

"Some of them are not going back at all."

Britain Urged U.S. Caution In Grenada

By Barnaby J. Feder

New York Times Service

LONDON — Prime Minister Margaret Thatcher said Tuesday that the British government had urged President Ronald Reagan to reconsider his plans to launch an invasion of Grenada after learning of them Monday, and added that no British ships or forces had participated.

The announcement in the House of Commons, the lower house of Parliament, that the British Commonwealth member nation had been invaded by an ally, despite the British government's expressed misgivings, led to harsh criticism of both the government and Mr. Reagan by opposition parties and some of Mrs. Thatcher's own Conservatives.

Sir Geoffrey Howe, the foreign secretary, underwent 45 minutes of tumultuous questioning when called upon to explain the events that had begun to unfold just three hours after he assured the Commons Monday that there was no reason to anticipate any military intervention.

Denis Healey, the Labor Party's spokesman on foreign affairs, said that the United States and some British Commonwealth nations in the Caribbean had deceived Britain about their plans. "None of the objectives stated by President Reagan justifies the invasion of an independent state," said Mr. Healey.

He described the invasion as the United States' "quite unpardonable humiliation of an ally."

The government, however, refused to condemn the invasion. During her question period, Mrs. Thatcher said: "We understand that what weighed heavily with the United States was the view taken by a number of Caribbean states who undoubtedly see things in a very different perspective than we do."

The government said that there were five times as many Americans as Britons in Grenada.

There was no indication of what Britain might do after the invasion. The Foreign and Commonwealth Office said Tuesday that it had no information on the whereabouts of Paul Scoon, the governor general who represents Queen Elizabeth II as the island's head of state.

Britain's only ship in the region, the frigate HMS Antir, was ordered to stay well away from the invasion and there was no indication that its orders have been changed.

Mrs. Thatcher's direct appeal to President Reagan to reconsider the invasion was reported by sources here to have come in a short telephone conversation early Tuesday morning. Sir Geoffrey confirmed that the call had been made.

The invasion has clearly touched a political nerve. It came amid charges by the Labor Party, under its new leader, Neil Kinnock, that the government's foreign policy is too closely linked to that of the United States and that Mrs. Thatcher's staunch support for Mr. Reagan is not matched by American sensitivity to British interests.

The Commons has scheduled a three-hour emergency debate on Grenada Tuesday in which the general question of coordinating foreign policy with the United States was expected to be a major topic.



RETURN FROM LEBANON — Prime Minister Pierre Mauroy greets a wounded French soldier at a military airport southwest of Paris. The soldier was among the first 11 evacuated after being injured in an explosion in Beirut.

Head of Marines Defends Security at Lebanon Base

(Continued from Page 1)

Marine building and the French headquarters on Sunday.

General Kelley flew here to inspect the site of Sunday's blast, but U.S. officials said the main purpose of the visit was to review security procedures.

Similarly, barricades and strong security forces were set up around the French quarters near the sports stadium and around positions of the Italian contingent in the peace-keeping force, which was not attacked.

A U.S. official said, "There is a limit to the security measures you can take and still operate. You can build 10-foot walls five feet thick [3 meters high and 1.5 meters thick] but you can't work like that."

The official said that after Sunday's attacks, "everybody looked at what more might be done," adding that security officers were now posted on the roofs of U.S. buildings to scan the streets for suspicious trucks and cars.

General Kelley, who said he planned to remain in Beirut a few days, spent 40 minutes Tuesday afternoon walking around the pile of twisted steel and crushed concrete that was the Battalion Landing Team's quarters.

Rescue workers continued to feverishly search the rubble for bodies, and operators with heavy cranes were attempting to remove large slabs of concrete.

General Kelley said that on his way to Beirut Tuesday morning he stopped in a military hospital in Wiesbaden, Germany, and saw a marine who had been critically injured in the blast.

He recounted that the marine had clutched his general's stars and then written on a piece of paper — because he was unable to speak — the words *semper fidelis*, the Marine Corps motto.

"Anybody who wouldn't be proud to be an American when we have young people like that isn't human," General Kelley said.

Four-Nation Meeting

The four countries participating in the multinational peacekeeping force will hold an emergency meeting on the bombings Thursday in Paris, Reuters reported from the French capital.

French officials said the gathering of officials from the United States, France, Italy and Britain was expected to reaffirm the countries' commitment to the force and to efforts for a political settlement in Lebanon.

France would express anxiety about being drawn into a Vietnam-style conflict and would press for wider international involvement in peace efforts.

Minister of External Relations Claude Cheysson was having preparatory talks with the British foreign secretary, Sir Geoffrey Howe, in London.

Schools Reopen in Chicago

The Associated Press

CHICAGO — Schools reopened here Tuesday after a 15-day teachers' strike ended. Nearly three-quarters of the 27,000 members of the teachers' union voted Monday to approve a pay agreement.

Reagan Says Caribbean Countries Sought Help From U.S.

(Continued from Page 1)

no choice but to act strongly and decisively."

Administration officials said Tuesday that they had received no reports of direct threats on the lives of the 1,000 or so Americans on the island, many of them medical students, but Mr. Reagan moved to foreclose what senior U.S. officials said was a concern that they could be taken hostage.

Referring to the Americans on the island, Mr. Reagan said, "There was no way of leaving. This was

WORLD BRIEFS

European Disarmament Talks Open

HELSINKI (AP) — Delegates from 35 nations began work Tuesday on the agenda for a disarmament conference described by Finnish Foreign Minister Paavo Vayrynen as a new dimension in European security.

The Helsinki deliberations, involving 33 European countries, the United States and Canada, are to lay ground rules for a conference on ways to ease East-West tensions set to begin Jan. 17 in Stockholm.

"The negotiations on military questions will add a new, significant dimension to the European security process," Mr. Vayrynen said at the opening of the session. The Stockholm meeting, expected to last at least two years, is a step in the process that began in 1975 when the 35 nations signed the "Final Act" at the Helsinki Conference on European Security and Cooperation.

Nakasone Rules Out Early Elections

TOKYO (AP) — Prime Minister Yasuhiro Nakasone said Tuesday he would not order early parliamentary elections despite the political stalemate created by the bribery conviction of the former prime minister, Kakuei Tanaka.

In a television interview, Mr. Nakasone said he will not dissolve the lower house of the Japanese Diet, or parliament, until the four-year term expires next June. Mr. Nakasone also indicated that Mr. Tanaka, who has been convicted of receiving \$2 million in bribes from the California-based Lockheed Corp., need not give up his Diet seat.

Led by the Socialists, opposition parties since the verdict have boycotted all but one Diet committee meeting and demanded that a Diet resolution to oust Mr. Tanaka be acted on. There has been speculation that Mr. Nakasone would hold general elections by the end of the year to maneuver his year-old administration out of the deadlock.

Conservative Group Wins Swiss Vote

BERN (AP) — Complete official returns from last week's parliamentary elections confirmed on Tuesday the victory of the conservative Radical Democrats, who increased their representation in the National Council by three seats to 54, their biggest share since the number of seats in the lower house was raised to 200 in 1963.

In the popular vote, they clearly outstripped the Social Democrats, their closest rivals and government partners, for the first time in 58 years, according to a still provisional nationwide survey. In the new National Council, the Social Democrats held 47 seats, a loss of four.

The complete results are as follows, with the number of seats held in the previous council listed in parentheses: Radical Democrats, 54 (51); Social Democrats, 47 (51); Christian Democratic Party, 42 (44); Swiss People's Party, 23 (23); Independent Alliance, 8 (8); Liberal Party, 8 (8); National Action, 5 (2); Protestant People's Party, 3 (3); Progressive Organization, 3 (2); Environmentalists, 3 (1); Communists, 1 (3); Autonomous Socialist Party, 1 (2); and others, 2 (2).

Papandreou Assailed for Plot Charge

ATHENS (NYT) — Evangelos Averoff, the conservative opposition leader, Tuesday accused Prime Minister Andreas Papandreou of slander for alleging that local and international rightist forces, with a base in Chicago, were conspiring to undermine his government.

He called on the prime minister to provide evidence, but the government spokesman refused to give any further details or comment on the issue. Mr. Averoff said that Mr. Papandreou's claims were unfounded and resulted from his fear that the Socialist government was rapidly losing public support. "The prime minister is resorting to his known tactic of slanderous fireworks," he said.

Mr. Papandreou said Monday that the rightists had set up a fund of \$120 million for the purpose of undermining the Greek economy and government. He said they were setting up offices in Chicago.

Judge Delays Start of De Lorean Trial

LOS ANGELES (LAT) — A U.S. District Court judge has admonished the CBS television network for interference with the judicial system in the John Z. De Lorean case and delayed the start of Mr. De Lorean's trial until he decides what course to take.

Mr. De Lorean's trial on cocaine-trafficking charges was to begin Nov. 1, but the televising Sunday of Federal Bureau of Investigation surveillance tapes by CBS and its Los Angeles station, KNXT, brought requests by defense and prosecution attorneys for a delay. The videotapes showed Mr. De Lorean examining the contents of a suitcase purportedly containing cocaine and his arrest by government undercover agents last year.

In a statement at a hearing Monday, Judge Robert M. Takasugi said he had a duty to protect the judicial system and the CBS interference in that process may have devastating effects [on the trial]. Hopefully it is not a mortal blow," Judge Takasugi expressed concern about the source of the videotapes, copies of which wound up in CBS's possession.

Heath Denies Pornography Allegation

LONDON (Reuters) — Former Prime Minister Edward Heath denied on Tuesday a courtroom allegation that he had appeared in pornographic photographs with a woman and a male police sergeant.

Mr. Heath, who led a Conservative government between 1970 and 1974, denied the allegation in a statement read to London's Old Bailey criminal court by his lawyer. The allegation was made in court earlier this month.

Mr. Heath, 67, is on a lecture tour in the United States. His statement said he was completely innocent and knew none of the parties involved. "As far as it concerns me, there is no truth whatsoever in this extraordinary story," it added.

U.K. Grants Asylum to Soviet Defector

LONDON (AP) — Britain has granted political asylum to a Soviet journalist, Oleg Bitov, who arrived in Britain after defecting to the West last month in Venice, the Home Office said Tuesday.

The Daily Telegraph reported that Mr. Bitov, 52, a former foreign editor of the Soviet weekly, Literary Gazette, was thought to have links with the Soviet state security police, the KGB. The Soviet journalist vanished Sept. 7 while he was covering the Venice International Film Festival. His paper had blamed the CIA for his disappearance.

He was being questioned by British security officials at a house near London, according to the Press Association news agency. It said officials were believed to be trying to establish Mr. Bitov's value to Western intelligence agencies. A Home Office spokesman said Britain "had accepted Bitov's application to remain here on a long-term basis."

5 Poles Flee by Plane to West Berlin

BERLIN (AP) — Five Poles flew a single-engine propeller plane to West Berlin on Tuesday and asked for political asylum, police said.

The Poles, four men between the ages of 19 and 29 and a 4-year-old boy, landed at Tempelhof Central Airport, a U.S. Air Force facility in West Berlin. They had flown 650 kilometers (about 400 miles) from a sports plane club in Swidwin, near Lublin, in southeastern Poland, a spokesman at Tempelhof said.

The Poles were in West Berlin police custody Tuesday evening, although a spokesman said they would not be charged. Police said they would be taken to a camp for refugees who are waiting for their applications to be processed.

da took shape last week and closely followed the scenario of a naval exercise conducted two years ago. The Associated Press reported from Washington.

By Friday night, Pentagon sources reported that U.S. troops and the aircraft carrier USS Independence were heading for the island. The invasion closely resembled a U.S. naval exercise conducted in August 1981, which the government of Prime Minister Maurice Bishop, who was overthrown and killed last week, denounced then as "a practice run for a direct invasion of Grenada by U.S. troops."

A State Department official, who spoke on condition that he not be identified, said the U.S. decision to mount the invasion "was made the middle of last week" after a "straw poll" of the Caribbean nations.

He said that by Friday, U.S. intelligence was providing information about the best landing sites, location of coral reefs, the basing of Grenada's security forces, and the site of arms caches.

U.S. Had Planned Invasion

The U.S. plans to invade Grenada.

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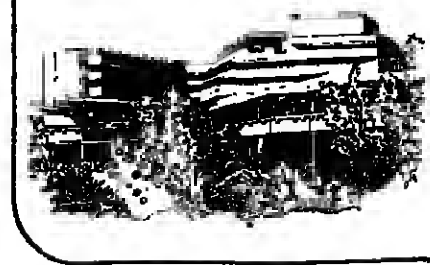
U.S. House Passes Bills To Cut Budget Deficit

The Associated Press

WASHINGTON — The House of Representatives passed a package of bills Tuesday designed to save the government \$10.3 billion, mostly in federal pay and pensions, as Congress began trying to chip away at a budget deficit projected to remain around \$200 billion if no action is taken.

The next installment of deficit reduction in the House was scheduled for later in the week when a House Ways and Means Committee package of tax increases, estimated at about \$8 billion over three years, is due to be considered.

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Reagan Dismisses 3 Members Of Civil Rights Commission

Compiled by Our Staff From Dispatches
WASHINGTON — President Ronald Reagan has dismissed three of the six members of the U.S. Civil Rights Commission to make room for his own nominees, the White House said Tuesday.

Mr. Reagan has been accused of encroaching on the commission's independence since May, when he nominated Morris Abram, John Buzzel and Robert Destro to replace three holdover members from previous administrations. On Tuesday, he dismissed those three — Mary Berry, Blandina Ramirez and Rabbi Murray Saltzman.

He has angered civil rights groups and their allies in Congress, who contend he lacks the legal power to dismiss commission members or replace them against their will.

But the White House said in a statement announcing the removals, "It is the constitutional power of appointment, so long a part of the American political tradition, that is at stake here."

The dismissals also reflect a continuing impasse in the Senate that has left the commission without budget authorization since Sept. 30, the end of the last fiscal year.

"This issue at stake in this matter is not the removal of certain individuals or the Civil Rights Commission itself," the White House statement said. "The issue is the

responsibility of the president to exercise the power given to him by law.

The commission, created in 1957, is an advisory body that investigates discrimination. It has no enforcement powers. It submits reports to the president and Congress and, over the years, many of its recommendations have become law.

The White House contended legislation before the Senate Judiciary Committee would thwart "the president's ability to exercise his power of appointment" by specifically retaining the three holdovers he dismissed Tuesday.

Mr. Reagan "is appreciative of the efforts made by a number of senators to reach a common solution on this matter," but disappointed that negotiations on a possible compromise have failed, leaving the commission technically out of business, the statement said.

"Thus far, the president has refrained from using his authority to remove the commissioners who would be replaced by his nominees while the Senate was considering their qualifications," the White House said.

"But in order to break the present deadlock and allow the commission's authority to be extended, the president has reluctantly concluded that he has no choice but to

remove the three holdover commissioners."

The controversy over Mr. Reagan's nominees has focused as much on the independence of the commission as their own merits.

So far, none of Mr. Reagan's nominees has been confirmed. Like the three dismissed Tuesday, they are Democrats, but they share Mr. Reagan's opposition to busing to achieve school integration and affirmative action goals to increase minority employment.

The White House statement Tuesday stressed all commissioners serve "at the pleasure of the president." The prerogative of replacing commissioners — an act requiring Senate confirmation — has been used sparingly.

Various options had been reviewed on how to break the impasse — including enlarging the commission, staggering the terms and retaining the current commissioners.

At the White House, the deadlock has been a source of frustration, compounded by anger directed at the commission in general and its Democratic members in particular.

Mrs. Berry and Mrs. Ramirez were appointed to the commission by President Jimmy Carter, and Mr. Saltzman was named by President Gerald R. Ford.

(UPI, AP)



ARCTIC CRUSH — At least three Soviet ships are still trapped by pack ice off the coast of far northeastern Siberia, Tass reported Tuesday. Icebreakers are en route.

Conservatives Accept Women Rabbis

By Charles Austin

New York Times Service

NEW YORK — The faculty at the Jewish Theological Seminary of America has voted 34-8 to admit women to the rabbinical studies program and ordain them as rabbis within Conservative Judaism.

Monday's vote culminated years of controversy over whether Conservative Judaism could accept women as rabbis, and it was certain to set off additional controversy.

The seminary is the only body in the United States authorized to ordain Conservative rabbis, and in the past its choices have been uniformly accepted for membership in the Rabbinical Assembly, the major international organization for Conservative rabbis.

Though a majority of Conservative rabbis support the move, there has been considerable opposition from those who believe that ordination for women violates Jewish law.

Until Monday's vote the seminary had been unable to come to a decision on the matter. In 1979 the faculty put off a vote that would have admitted women. A year later the Rabbinical Assembly voted 156-115 for ordination for women. But last summer, the first woman

to apply for admission was denied membership because she fell four votes short of the two-thirds majority needed.

That meeting was marked by heated debate over whether Jewish law permits ordination for women and over how the decision to accept women as rabbis would affect relations with Orthodox Judaism.

Monday's vote is likely to heighten tensions between the Conservative and Orthodox wings of American Judaism. Orthodox Judaism staunchly opposes ordination for women, saying it violates Jewish religious law. It has been increasingly critical of a number of recent decisions taken by both the Conservative and Reform branches of Judaism.

Reform Judaism has ordained women for the last 11 years; there are now about 60 women rabbis in the United States.

Dr. Gerson D. Cohen, chancellor of the seminary and president of its faculty, characterized Monday's closed meeting as "full of debate" but without rancor.

"We have been able to overcome inhibitions of centuries and achieved a major step in the equalization of women in Jewish religious life," Mr. Cohen said in an interview.

The seminary is the highest academic authority for the worldwide Conservative movement, which has rabbis and congregations in North and South America, Israel, Japan and several countries in Europe. As yet, no women have been ordained as rabbis by the Conservative movement anywhere in the world.

A group within Conservative Judaism that opposed the faculty decision said after the vote that the decision "defies all norms of Jewish jurisprudence." The group, the Union for Traditional Conservative Judaism, issued a statement that challenged the way the matter was put to "popular vote of the seminary's entire teaching staff — few of whom would claim expertise in Halakha, a third of whom are not rabbis, some of whom are not even religiously observant."

Halakha is Jewish religious law that is based on an oral interpretation of the Scriptures. The dissenting organization said it would convene its own panel of scholars to pass judgment on Jewish legal matters and establish a journal that would serve as "an organ of Halakic opinion within the Conservative movement."

Reagan Tries Appeasing Democrats on IMF Vote

By Juan Williams and Hobart Rowen

Washington Post Service

WASHINGTON — President Ronald Reagan, yielding to demands by the speaker of the House, Thomas P. O'Neill Jr., has expressed his "strong appreciation" to 21 Democrats for voting to increase funding for the International Monetary Fund without unnecessarily tying its hands.

The long-awaited letter, sent late Monday and designed to assure the Democrats' support for a stalled \$8.4-billion appropriation for the international lending agency, may backfire, losing votes of liberals and conservatives, said Representative David R. Obey, a Wisconsin Democrat, one of the 21.

The 21 Democrats had been attacked in a Republican congressional campaign committee fund-raising letter for voting to "give loans to Communist dictatorships." The Republicans had called the Democrats' vote a "slap in the face of the taxpayers."

Mr. O'Neill, a Massachusetts Democrat, had denounced that reaction as "red-baiting." He said he would block a further vote on the urgently requested increase in the U.S. contribution to the IMF if the president did not apologize.

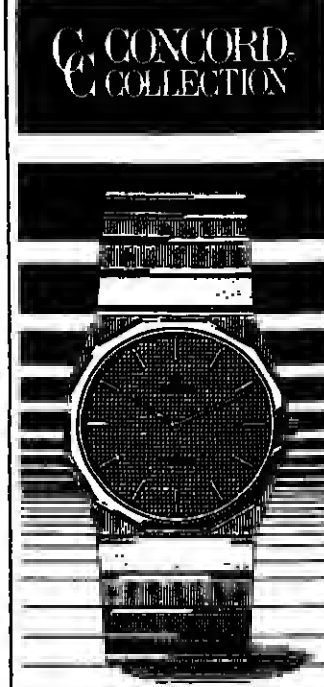
Mr. Reagan's letter to the House read in part: "While I understand much rhetoric and controversy has surrounded this issue, it is my hope that differences on both sides of the aisle could be laid aside, thus allowing for early passage."

The issue arose over an IMF funding bill amendment that would require the fund's U.S. director to vote against making loans to Communist countries. The amendment passed, 242 to 185.

In a telephone interview Monday night, Mr. Obey said Mr. Reagan's apology offered only a "grudging, convoluted and grace-

less" disavowal of the Republican campaign document.

"As a result, he has the worst of both worlds," Mr. Obey said, adding that the substance of Mr. Reagan's letter amounts to a repudiation of the campaign document and of the restrictive amendment offered by Representative Phil Gramm, Republican of Texas.



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Studies Say U.S. Tax Burden on Poor Has Grown Substantially Since 1978

By Robert Pear

New York Times Service

WASHINGTON — The federal tax burden on poor people has increased substantially in the last five years, according to new studies by congressional tax experts and several economists.

The increase, they said, continued despite the action taken by Congress in 1981 to reduce tax rates across the board for people at all income levels.

The increase was most significant for people near the government's official poverty level. A family of four was classified as poor last year if it had cash income of less than \$9,862, which is called the poverty level. The Census Bureau reported in August that 15 percent of all Americans were living below the poverty line.

For a family of four people with an income of \$9,862, federal payroll and income taxes together took 9.6 percent of income last year. By contrast, federal payroll and income taxes took just 4 percent of income in 1978, when the poverty level stood at \$6,662.

The poverty level now is substantially higher than the point at which people start paying income taxes, and a new study by the Congressional Joint Committee on Taxation shows a widening gap between the two levels. The poverty line is adjusted for inflation, rising each year to reflect changes in the Consumer Price Index, but there is no such adjustment in the starting point for taxes.

Hence, according to Eugene Steuerle, an economist at the Treasury, "more and more people below the poverty level are becoming subject to federal income taxation."

This reverses a trend established in the last two decades. The study by the professional staff of the joint committee said, "Through the 1960s and 1970s, Congress attempted, in several tax reduction bills, to eliminate the tax burden on families whose incomes were below the poverty line."

Last year a family of four at the poverty level had to pay \$285 in income tax and \$661 in payroll taxes, for a total of \$946, or 9.6 percent of its income of \$9,862. The tax burden is expected to rise to 9.8 percent of the poverty-level income this year and 10.1 percent in 1984, the committee estimated.

The tax burdens were somewhat heavier for larger families. For a family of five people last year, the poverty level was nearly \$2,500 higher than the threshold at which people must start paying income taxes. So a family of five at the poverty line had almost \$2,500 of taxable income. Such families owed 10.3 percent of their income in taxes, the committee said.

In another study, Timothy M. Smeeding, an economist at the University of Utah, said he had reached the same conclusion as the congressional committee. "Clearly," he said, "there are poor and near-poor people in America today who must pay significant amounts of tax."

While many poor people receive tax-exempt welfare and Social Security benefits, the congressional joint committee said, there are also many poor people who must rely on fully taxable earned income as their primary means of support.

Economists said the increase in tax burdens for the "working poor" coincided with two other developments: the government's increasing dependence on payroll taxes to help finance Social Security and Medicare, the health insurance program for the elderly, and the Reagan administration's success in curtailing welfare and Medicaid benefits for the working poor.

Payroll taxes accounted for 19 percent of all federal revenue in 1965 and 23 percent in 1970, according to Treasury data. They will account for 35 percent this year and 37 percent in 1988, the Treasury estimates.

"Payroll taxes are a much heavier burden on low-income earners than are income taxes," Mr. Smeeding said.

In social welfare programs, one of the biggest changes made by Congress at President Ronald Reagan's request was to eliminate or reduce cash assistance payments for the working poor.

Pointing to such changes, Jack A. Meyer, an economist at the American Enterprise Institute, a private nonprofit research group, said last week that "a disproportionate share of the budget-cutting burden was placed on low-income households" in the last two years.

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Peronists Stump Among the Opposition

Campaign Foray by Movement's Leader Points Up Close Race for Presidency

By Edward Schumacher
New York Times Service

CORDOBA, Argentina — In the Argentine, the political heir to Juan Perón, gambled on Peronism's most sacred day by bringing his presidential campaign here to the heart of the opposition. And the crowds roared.

More than 150,000 people, by conservative estimates, carpeted 10 city blocks on Oct. 17, the anniversary of the party's founding. They beat drums and chanted the name that has rocked this nation for 40 years: "Perón! Perón!" But this time they mixed in the name "Luder!"

Many of the younger men, evoking the appeal of Perón's wife Eva to the "shirless ones," went bare-chested on a balmy spring night.

With national elections aimed at ending nearly eight years of military rule scheduled for Oct. 30, the rally was the latest in a revival around the country of Peronism's legendary but long-dormant spirit.

Mr. Luder, a silver-haired former law professor and senator whose stiff style was not igniting voters, responded with seldom-seen passion. His own shirt collar open, he slashed the air with his hands for emphasis in an off-the-cuff speech lashing at Peronism's historical enemies: the military, the oligarchy and foreign influences.

The three, he said, "find themselves in a pitiful agony, and have lost control of the internal and external situation, and have brought us to the border of national dissolution."

"We declare to all Argentines that Peronism will bring the country justice and order for all — for the helpless, for the forgotten of the earth," he shouted.

Campaign organizers credit the

revival to a coalescing of the party's many factions in the face of a rising campaign by Mr. Luder's rival, Raúl Alfonsín, the candidate of the Radical Party. Mr. Luder is a slight favorite, but pollsters say the race is so close that the Peronists could lose their first election in 40 years.

The Peronist campaign was being largely carried by memories of the Peronist past. Scratchy recordings of speeches by Juan and Eva Perón became campaign mainstays to bolster the 66-year-old Mr. Luder's preference for what he calls "prudence." But Eva Perón died in 1952 and Juan Perón in 1974; Isa-

bel Perón, Perón's last wife and successor, is in silent self-exile in Spain.

Mr. Luder upset party leaders by coming to this interior city. Known for its magnificent colonial churches and universities, Córdoba is Argentina's second city after Buenos Aires. It is also a political stronghold of Mr. Alfonsín.

Party leaders had demanded that Mr. Luder celebrate the party's founding in the industrial suburbs of the capital, a Peronist stronghold seen as a safe draw in a numbers war between the candidates never when attracts the largest

crowds. Mr. Alfonsín had been winning.

It was on Oct. 17, 1945, that the Argentine masses, beckoned by Eva Perón, went into the streets and won the release from barracks arrest of Juan Perón, then a colonel. It was the first flexing of the Peronist muscle that was to lead to Juan Perón's election as president months later.

But while the overwhelming response underscored the continuing power of Peronism, Peronism itself remains a tender issue that divides Argentines.

Its adherents insist that it is not a party, but a movement, and it does have a mythic appeal. "Peronism is a death," declared Ángel Oscar Rando, a 52-year-old vendor who attended the rally with an Argentine flag draped around his neck. "We have only one leader — Perón — but Luder is part of the doctrine."

"I am a Peronist from my soul," said a tiny 41-year-old nurse in the midst of the throng. "It was Peronism that gave me a scholarship as a child to be what I am."

Peronism even has its own language. Peronists call each other *compañeros*, or comrades, and the desire to be one is imbued by parents in their children.

Mr. Alfonsín has been reminding voters that past Peronist governments have been marked by terrorism, censorship and union thuggery. Mr. Luder has accused Mr. Alfonsín of encouraging divisiveness and has insisted that Peronism has "matured."

Mr. Luder is a moderate rightist in the party spectrum. That mostly means he is anti-Communist, a point that until several days ago he had hammered until it conflicted with the discomforting fact that he has been endorsed by the Communists and other leftist parties, whose votes he needs. The leftists say they are siding with "the people."

But even Mr. Luder, who with the Peronist right is closely allied to labor unions, favors expansive welfare and state control of major industries, such as utilities and oil.

Raids Force Nicaragua To Make Energy Cuts

Washington Post Service

MANAGUA — The Nicaraguan government announced sweeping measures Tuesday to save energy following a series of attacks by guerrillas on the nation's oil installations in the past seven weeks.

The steps include cutbacks ranging from 10 percent to 30 percent, depending on the type of consumer, in supplies of gasoline under an existing rationing program and other measures such as turning off street lights after midnight. Private motorists will be restricted to 18 gallons of gasoline a month compared with 20 gallons until now.

The steps, which take effect next Tuesday, were announced in a full-page communiqué published in *Barriada*, the official newspaper of the ruling Sandinist front. It warned that further conservation

measures could be adopted in case of "an increase in the terrorist aggressions that imperialism, by means of the CIA, is directing against Nicaragua."

Anti-Sandinist guerrillas have staged five attacks on the nation's oil installations since Sept. 8. The Central Intelligence Agency urged the insurgents to start attacking major economic targets after the failure last summer of a strategy of seeking to seize and hold territory in northern Nicaragua, according to rebel and U.S. intelligence sources.

In the two most damaging raids so far, guerrillas set fire to fuel storage tanks in the ports of Corinto and Benjamin Zeledón. The flames destroyed about four million gallons of gasoline, diesel oil and other fuels, or the equivalent of about a week's national consumption, according to diplomats.

In addition, guerrillas twice sabotaged an underwater pipeline at the crude oil receiving terminal at Puerto Sandino that handles more than three-quarters of Nicaragua's petroleum imports. In a third incident there, a rebel pilot's rockets missed their target.

The government did not announce any tightening in rations for the military or for industry. Officials said these sectors were considered too important to be deprived of fuel. Some vital industrial installations will be permitted to operate on Saturdays, the communiqué said.

Mexico provides Nicaragua with virtually all of its crude oil and refined products. Nicaragua generates about half of its electricity by burning petroleum.

3 Party Officials Killed In Guatemala, Chief Says

The Associated Press
GUATEMALA CITY — Three rural leaders of the Christian Democratic Party have been shot to death in their homes, the party leader, Vinicio Cerezo, said Monday.

He said he believed local rightist leaders acting with the support of local authorities carried out the killings during the past two weeks in the town of El Semillero, 86 miles (139 kilometers) southeast of the capital. Christian Democrat officials say 33 party members have been killed in 1983 and more than 280 party members have been slain since 1981.

Bill Would Slow Tax Exclusion for Citizens Abroad

International Herald Tribune

WASHINGTON — The chairman of the House Ways and Means Committee will propose a postponement of three scheduled increases in the earned-income exclusion for Americans living abroad as part of a plan to raise \$11.5 billion in federal revenues.

The proposal, by Representative Dan Rostenkowski, Democrat of Illinois, would postpone for three years a variety of tax breaks passed in 1981 and 1982. It is to be offered as an amendment to an \$8-billion tax bill scheduled for House consideration Thursday.

Under the Economic Recovery Tax Act of 1981, the exclusion is to rise from \$80,000 for income earned in 1983 to \$85,000 in 1984, to \$90,000 for 1985 and to \$95,000 for 1986 and thereafter. Under Mr. Rostenkowski's proposal the increases would be delayed until 1987, 1988 and 1989.

Aides to Mr. Rostenkowski said the amendment should be characterized as a "tax freeze," not a tax increase.



Prime Minister Yitzhak Shamir casting his vote Tuesday.

Israelis Take a Day Off To Elect Local Officials

United Press International

JERUSALEM — Israel voted Tuesday for 147 mayors and local councilmen in elections that may indicate the popular strength of the new prime minister, Yitzhak Shamir.

The results could indicate how candidates of the ruling Likud bloc fare without the coalition's founder, former Prime Minister Menachem Begin. The vote could also reflect attitudes toward the austerity measures planned by Mr. Shamir to cope with Israel's economic crisis. Israelis who cast ballots were excused from work, under a decision by the Israeli parliament, the Knesset. The holiday was criticized Monday by the *Jerusalem Post*, which said in an editorial: "Three and a half billion shekels [\$43 million] is what the day off decreed for tomorrow will cost."

Israeli soldiers in Lebanon began casting ballots Monday, and their voting was scheduled to last through Wednesday.

Jordanian Ambassador To New Delhi Is Shot

United Press International

NEW DELHI — Mohammad Ali Kourme, Jordan's ambassador to India, was shot Tuesday in front of his residence, and the Indian Foreign Ministry said the assailant, who escaped, appeared to be "connected with the Middle East."

"We suspect it is part of the overall terrorism connected with the Middle East situation," the Indian Foreign Ministry said. The ministry said the gunman was "a foreigner" but did not offer an explanation for the shooting.

The Indian government immediately increased security around all Arab embassies and checked airports, trains, buses, hotels and the whereabouts of foreigners who had recently arrived in New Delhi.

Mr. Kourme, 55, was in "deep shock" and was listed in critical condition at the All-India Medical Institute. He was shot seven times and sustained wounds to the neck, shoulder, stomach, leg and side, doctors said.

The ambassador, who remained conscious throughout the shooting, said, "I have seen him" but gave no other details, police said. The ambassador's cook took Mr. Kourme to the nearby U.S. Embassy's health-care unit, where he was treated before being moved to the medical institute.

The assailant, escaped in a taxi and kept shouting at the driver, "Connaught Place, Connaught Place. Speed, speed," the driver said. Connaught Place is New Delhi's main shopping area.

"The gunman was 30 to 34 years old, wearing light blue, baggy clothes, and had a moustache," a witness said. "He was a foreigner, not an Indian."

"When the ambassador got out of his black Mercedes in front of his house, the gunman walked up to him and began shooting. When the ambassador fell down after being hit by three shots, the gunman walked closer and stood over him, and kept shooting," the witness said. "Then the gunman ran a little distance to the shops, then walked, and then ran and disappeared."

Police said the assailant fired a few shots from his automatic weapon into the air to frighten shoppers who tried to pursue him.

He then climbed into a parked taxi and forced the driver to help him escape, police said. He jumped out of the taxi two miles (3.2 kilometers) away at a busy intersection and escaped.

Iraq Tells Japan of Plan To Bomb Iran Oil Site

Reuters

TOKYO — Iraq has told Japan that it intends to bomb an unfinished Japanese-Iranian petrochemical complex at the Iranian port of Bandar Khomeini, the Japanese Foreign Ministry said Tuesday.

It said that Iraq's deputy foreign minister, Mohammed Said Sahas, told the Japanese ambassador to Baghdad, Keizo Kimura, on Monday that any Japanese on the site should be withdrawn.

A spokesman for the Mitsui group, which heads the Japanese side in the project, said no Japanese were now at the site but more than 1,000 Iranians were carrying out maintenance work there.

Work on the complex began in 1973 but was abandoned in September 1980 when the Iranian-Iraqi war broke out.

Iraqi aircraft bombed the complex, which was 85 percent completed, several times in the early stages of the war.

Iraq's threat to bomb it again followed agreement between the Mitsui group and its Iranian partner, the National Petrochemical Company, to complete the project, with Iran providing the money and Mitsui the expertise.

Mitsui has refused to provide additional funds beyond the \$3.2 billion already spent and has insisted that hostilities in the area must stop before it would return Japanese staff to the site.

Iraq said last week that it had mined the approaches to Bandar Khomeini in one of several moves that the ruling Ba'ath Party newspaper *Al-Thawra* said were designed to force Iran to the negotiating table.

The Japanese international trade and industry minister, Sosuke Uno, said at a press conference that Japan was seriously worried by the Iraqi threat.

A Mitsui spokesman said the agreement called for work on the complex to resume in January, but said the company would watch the situation closely and might have to reconsider its plans.

Israelis Disavowing Link To U.S. Role in Lebanon

By Edward Walsh

Washington Post Service

JERUSALEM — Fearful of a public opinion backlash in the United States, Israeli officials have sought to distance themselves from the chain of events that led to the dispatch of marines to Beirut and eventually to Sunday's bomb attack on the Marine headquarters.

The theme that the presence of the marines in Beirut was an "American decision" designed to protect "American interests" has been stressed by government officials and members of the political opposition alike.

At the same time, there was no indication that the attacks on the headquarters of the marines and the French paratroopers serving in the Beirut multinational peace-keeping force would have any impact on Israel's decision to concentrate its attention and military resources on its "security zone" south of the Awali River, away from the bloodshed and chaos of Beirut.

The Beirut attacks clearly heightened the Israeli sensitivity to any suggestion that their policies played a role in the direct U.S. involvement in Lebanon and now to a military disaster far worse than any single setback the Israelis have suffered during their 16 months in that country.

This was particularly the case because the attacks on the U.S. and French headquarters followed by only a few weeks a radical change in Israeli policy that, in effect, left the task of pursuing some of Israel's now-abandoned goals in Lebanon to the multinational force.

The Israeli move into West Beirut was part of an ambitious strategy devised by Prime Minister Menachem Begin and Defense Minister Ariel Sharon to see installed in the capital city a Christian-dominated government friendly to Israel. But that goal has now been all but abandoned by Israel's new leaders, Prime Minister Yitzhak Shamir and Defense Minister Moshe Arens, who last month ordered an Israeli withdrawal from the Beirut area to the enclave south of the Awali.

Since the Israeli withdrawal, there has been virtually no contact between the U.S. marines and the Israeli Army, stationed less than 25 miles (40 kilometers) to the south, according to an Israeli official.

Israeli officials acknowledged when questioned Monday that Israel still had a stake in the stability of Lebanon, and particularly in the prevention of a takeover or domination of its northern neighbor by Syria. But they suggested that this was secondary to the "vital interests" the United States has in Lebanon.

While reluctant to express themselves publicly, Israeli officials were clearly pleased by President Ronald Reagan's pledge that the United States would not be driven from Lebanon by acts of terrorism. But even if the marines withdrew, there appears to be virtually no support here for a more active Israeli role in attempting to shore up the Lebanese government of President Amin Gemayel.

"We could come back to Beirut, but that is not going to happen and I don't think they [the Americans] want us to," a senior official said. "You know how painful and damaging it was. We don't need to do that again."

Testifying Monday at a closed session of the parliamentary committee on defense and foreign affairs, Mr. Arens reportedly emphasized the point made repeatedly by

other Israeli officials. He was quoted as having said that the marines entered Beirut to serve U.S. interests and to demonstrate its disassociation from Israel's policy at the time in Lebanon. He was quoted as having added, "The Reagan administration, the Congress and the American public know why the marines are there."

U.S. Warned By Russians On Mideast

Reuters

MOSCOW — The Soviet Communist Party daily *Pravda* said Tuesday that the United States should not use the Beirut bombing as a pretext for further involvement in the Middle East.

Pravda said the attack was "a direct result of the adventurist policy of Washington sending in its forces wherever the course of events does not follow the American scenario."

"Use of these blasts as a pretext for even greater involvement in Middle Eastern affairs will lead to complication of an already dangerous situation," a *Pravda* commentator, Pavel Demchenko, wrote.

He said it was no surprise that Iran had been blamed for the attacks on the French and U.S. contingents of the multinational peace-keeping force in Lebanon while "naval units of the U.S. and England wait off Iranian shores."

Syria, the Soviet Union's closest friend in the region, had also been mentioned, he said, because Syria stood in the way of U.S.-Israeli plans.

Western and Middle Eastern diplomats said that, while Moscow probably had no hand in the attack, the consequences suited Soviet interests in the region.

"The greater the chaos in Lebanon, the more the Syrians can extend their influence," one said.

The Kremlin has bolstered Syrian forces and given its backing to leftist anti-government troops in Lebanon with the aim of blocking U.S.-led peace arrangements, diplomats said.

■ *Izvestia* Attacks U.S. Role

Earlier, *Serge Schmemmann of The New York Times* reported from Moscow:

The Soviet position on the multinational peacekeeping force in Lebanon has been critical from the outset. *Izvestia*, the government newspaper, declared Friday that U.S. troops were sent into Lebanon "to do what their strategic ally, Israel, had failed to do — that is, to turn Lebanon into a military marshaling point for American imperialism in the Middle East, to make Lebanon a new victim of the Camp David conspiracy."

Moscow has insisted that peace in Lebanon can be achieved only by a total withdrawal of Israeli and Western troops. At the same time, *Izvestia* maintained that the "interference" of these troops could not be equated with the presence of Soviet-backed Syrian and Palestinian forces in Lebanon since these had been brought into the country by a decision of the Arab League.

Izvestia said the Soviet Union supported the "legitimate demands of the Lebanese national-patriotic forces and of Syria for the withdrawal of Israeli occupation troops and interventionist multinational forces."

U.S. 'Neoliberals' Gather To Redefine Their Cause

By William E. Farrell

New York Times Service

RESTON, Virginia — They call themselves "neoliberals" and admit, as one of their founders put it, that it is a terrible name for an important movement.

More than 200 of them — politicians, teachers, lawyers and others — gathered here last weekend. Surrounded by brisk hints of autumn, they sequestered themselves in meeting rooms to seek ways to match their evolving ideas with a constituency they feel is waiting to be mobilized.

The conference was sponsored by *The Washington Monthly*, a small, spirited publication that is as serious as it is impetuous. The term "neoliberal" was coined by Charles Peters, a sprightly man who founded the magazine in 1969 and is its editor in chief. Mr. Peters, a former Peace Corps official and one of Washington's most genial iconoclasts, would like to find a better term to describe a movement that questions the tenets of what he and his followers call the "old liberalism."

In a speech that acknowledged that the movement lacked unanimity on a number of issues, Mr. Peters said: "First of all, and most important of all, we are liberals."

"We criticize liberalism not to destroy it but to renew it by freeing it from its myths, from its old automatic responses in favor of unions and big government and against business and the military," he said. "We want to rescue liberalism from the prejudices, the blinders that keep it from seeing reality."

He went on to say that "neoliberals" were out to rectify a calcified concept of liberalism that was chary of criticizing "the good guys," such as public school systems, the civil service and the unions, and equally unwilling to

say anything good about "the bad guys, meaning the police, the military, businessmen and religious leaders."

He criticized the "me generation" attitude as a pernicious one, potentially debilitating to a sense of national unity, and said that, for far too many people, liberalism had devolved into a politics of lip service in proportion to the personal comforts one had attained.

"Neoliberalism," he said, meant, among other things, "voting for a candidate not on the basis of what he has done for you or your special group but on the basis of what he has done for the community as a whole."

The conference included panel discussions on education; health and the environment; law and the courts; national security; economic growth; and one called, simply, values, which drew a large audience.

At the discussion on education, Governor Bruce E. Babbitt of Arizona, a Democrat, said the Democrats had for too long been "held in bondage by their own constituency, the education establishment."

Peggy Holliday, principal of Daniel Middle School in Raleigh, North Carolina, said, "We've got sorry teachers — God knows, we've got some bad ones — and it takes almost an act of God to get rid of them."

There, appeared to be general agreement that liberals were too bent on solving disputes through litigation. At the law and courts panel, the moderator, Robert M. Kays, said: "There are more lawyers in this room than in all of Japan."

Professor Robert Nagel of the University of Colorado Law School said the courts had often gone to "zany extremes," citing as an example one argument that "sleeping is a symbolic act of speech."

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ARTS / LEISURE

English Lavender Making Last Stand

By Erica Brown
New York Times Service

LONDON — There is something quintessentially English about the scent of lavender, conjuring up, as it does, the gardens of thatched cottages adrift with the plant and elegant, snow-haired women who always wear pearls and still powder their noses. But, like them, English lavender is something of an endangered species, even though ornamental scents, herb-based toiletries and potpourri are increasing in popularity on both sides of the Atlantic.

Today the only commercial grower of lavender in England is Norfolk Lavender Ltd. in Heacham.

"The whole lavender business almost died in the 1930s," said Henry Head, Norfolk's managing director. "Partly it was because the traditional growing areas close to London fell to suburbia, but mostly it was because of the introduction of synthetic essences for perfume. Then during World War II all export of lavender from France, the other main producer, stopped under the Occupation, and that kept the industry here afloat."

Norfolk Lavender grows its crop on about 100 acres (50 of them on the Sandringham Estate and leased from the queen) in and around Heacham, a village in northern Norfolk.

All commercially grown lavenders are hybrids and must be propagated by cuttings, Head said, adding: "We are constantly crossing varieties to try to get a higher oil-producing plant that, at the same time, keeps its fragrance. Once we find one — we get about one good cross per 1,000 tries — it takes two years to make sure the new variety is true. Only then can you take perhaps about 50 cuttings. Five years later you check those and take 50 more cuttings. Since you need 5,000 plants an acre, it can take about 20 years to get a five-acre field."

Forty people, most of them seasonal workers, harvest the lavender

to be dried first; that for oil is left longer. "You get more oil from flowers that are dying," Head said. Until 1964 the cutting was done by hand. Now a mechanical cutter does the work.

The flowers and stalks are shipped to a distillery, where they are intended for oil are packed into copper stills. The result, a mere hour later, is jars of water with oil floating on top.

The distilled essence, on which the concern says the profit is minimal, smells nothing like gentle lavender. Indeed, it smells of very little at all, but it has an astringency that hits the nostrils. For perfume, aftershave and toilet water, which are more profitable, it is diluted, 4 percent essence to 96 percent denatured alcohol.

Lavender oil has a long history of medicinal use as an antiseptic and analgesic (Pliny recommended it for snake bites; others suggested it for headaches and faintness), and the flowers have been used for centuries, strewn among linen or tied into small bags and hung in clothes closets to keep moths at bay.

To get products containing true English lavender you have to be careful. "Many of the English firms use French lavender," said Head, and it seems the French does not have the subtlety of the English.

"We have a long association with Yardley and sell just under half our output to them," Head said, referring to the English cosmetics and toiletries producer. "The rest goes into our own products."

Even with Yardley products the shopper must be careful, Head said. In the United States, Yardley is operated under license by Jovan, a division of the Beecham Group of Chicago.

Richard Hinchley, the lawyer for Yardley United Kingdom, commented: "Jovan sticks closely to the original formula, but you would notice a difference in fragrance if you put the two side by side. Norfolk lavender has, if you are a good nose, a distinct and unique scent."



Tomoka turns his back on the tube to examine human fans.

Checking Out the Fans In the Washington Zoo

By Sandra Evans Teeley
Washington Post Service

WASHINGTON — He sat transfixed before the screen, watching the Redskins as he ate his natural-food snack. They would score, but he would show no emotion. At times, he would simply walk away in silence if the action wasn't to his liking, but then he would return.

Across the hall, his neighbor Azy was more expressive. As the football players returned to the scrimmage line, Azy leaped up excitedly, stared intently at the TV set — and urinated directly under it. He then went about the more absorbing business of chewing gum and climbing a tree at the same time.

In many ways, typical "Skins" fans, but in other ways not.

These have more body hair than most and are confined behind bars, in the Great Ape house at the National Zoo. While some of them have definite potential as linemen or even quarterbacks (one recently escaped gorilla in another part of the country threw a hapless human a number of yards without the slightest threat of being sacked, according to one zoo assistant), this is as close as they are likely to get to the National Football League jungle.

Each gorilla and orangutan in the Great Ape house now has access to a TV set, thanks to donations, and on any given Redskins Sunday they join millions of fans in front of the tube.

"We did it to counteract the boredom," Caldwell Graham, animal keeper leader at the Great Ape house, said of the decision to give the apes something to look at besides each other and the steady stream of hairless visitors. There is only so much a gorilla or orangutan can do in a cage, Graham pointed out.

Some of the apes weren't inclined to watch the "Skins" take on the St. Louis Cardinals in one recent game. Primates on the other side of the bars did watch, however — fathers, mothers and kids who came for the apes but lingered over the Redskins.

"Must not be much of a game if even the gorilla isn't watching," one man said lightly as he moved to turn away. In fact, most of the crowd, out in force in spectacular weather, didn't watch for long as the Redskins rolled to an easy victory over the Cardinals.

Football is only one thing the apes watch. They particularly like to see other animals, and are drawn to cartoon shows as well, Graham said.

A zookeeper of more than 30 years' experience, Graham said he had not noticed any changes in the apes' basic behavior since they started watching TV. Their natural inclinations apparently were already violent before they tuned in. "He's a beautiful specimen, but he's mean, boy," Graham said of Hercules, an 18-year-old gorilla that sat spellbound watching the

A Rare and Radiant 'Cherry Orchard'

By Sheridan Morley
International Herald Tribune

LONDON — The whirling of time brings in strange theatrical revenges: When Lindsay Anderson first directed "The Cherry Orchard" at Chichester in an undistinguished 1966 season, he was accused by one critic, Mervyn Jones, of selling out his Royal Court heritage to "a Haymarket tradition of famous actors and actresses which dispenses with any overall design or interpretation of the play." Now Anderson has returned to the play and taken it straight into the Theatre Royal Haymarket, where, sure enough, it works very well indeed.

This theater is rather better suited to the play than was Chichester, where the final locking-in of Firs always seemed a little strange given that the open stage had about half a dozen exits out of any of which he could have wandered. In Bernard Miles' wonderfully dotty new rendering he is well and truly shattered up to die as they start to chop down the cherry trees, and we are left with the very double vision of an actor whose theatrical heritage is also now in Mermad jeopardy.

But Anderson's new production is in no need of such nudges from real life. It builds and strengthens on its Chichester roots, gaining immeasurably from many of the lessons learned there. Back in 1966, you have to recall, they were still only a year or two from the great Lawrence Olivier-Michael Redgrave triumph at Chichester with "Uncle Vanya," and another Chekhov must have seemed an obvious winner. In fact it was not, largely because of Celia Johnson's deep unhappiness in the role of Madame Ranevskaya on the open stage, and the fact that she and Hugh Williams, as Gayev, seemed to be recalling "Brief Encounter" rather than the collapse of the Russian landed gentry.

Yet, coming as it did less than a decade after the celebrated Moscow Art Theater visit to Sadler's Wells had shown us how to get the cobwebs off Chekhov and play the real comedy instead of the phony nostalgia, Anderson's original

"Cherry Orchard" was the first to relate the play to local sensibilities: Tom Courtenay as an angry, young-man Trofimov and even the drenched elegance of the Johnson-Williams partnership suggested that you did not have to be Russian

THE LONDON STAGE

to forecast the coming of a revolution or regret the losing of a childhood nursery.

Anderson's return to "The Cherry Orchard" has recaptured a lot of that feeling: The only actor to survive into the current cast is Bill Fraser as a splendidly blustery Simonov-Pischik, but in giving the role of Gayev to another West End comedian untrained in the major classics (Leslie Phillips) and in having Trofimov played once again by one of the most promising actors of the current New Wave (Frank Grimes), Anderson has clearly laid his stage tracks in much the same direction.

Apert, however, from the proscenium arch, never more welcome, the real bonus this time is Joan Plowright: In a radiant return to the live theater after far too long an absence, her Ranevskaya is the first in 20 years to challenge Peggy Ashcroft's and is (unlike that other great dame) rooted in a kind of warm local experience all too seldom achieved by the British in Chekhov.

When this Ranevskaya returns to her estate for the last time it is almost as a character out of Enid Bagnold or N.C. Hunter, whose ghosts still inhabit the Haymarket: She is all of our family loony aunts going back to the family attic for a final romantic root around the human bric-a-brac, dealing along the way with aged and even loonier retainers. Thus we get out only

No More Jefferson Stamps

The Associated Press

WASHINGTON — The oldest stamp in the U.S. Postal Service inventory, a two-cent likeness of Thomas Jefferson, will be retired after Nov. 30, the Postal Service has announced. The stamp was first issued in 1954.

'David' Museum Is Closed for Repairs

The Associated Press

FLORENCE — Authorities have closed for repair the Academy of Fine Arts in Florence, which houses works of art that include Michelangelo's David.

City officials said Tuesday that the museum would be shut for

about four months for major work such as installation of air conditioning and humidity control. The work is to start next month.

David, hewn from a block of marble abandoned by another sculptor, is celebrated for its anatomical perfection. The statue was finished in 1503.

Lord Miles solemnly addressing his legs as if they were recalcitrant children, but David Bartley as the walking disaster Verelstodov and Margaret Robertson as a mustachioed conjuring governess. On the other side of the green baize door we get Joanna David and Cora Kinnaird in fine elegant form as Varya and Anya, while hovering somewhere on the threshold is Frank Finlay's Lopakhin.

Finlay and Plowright as a stage team go back a long way, which means we can take for granted Lopakhin's unstated devotion to the lady from whose estate he is about to evict her. But the purchase of the cherry orchard is not played here as the usual act of aggression in a class war. Instead, it is just one more inevitable event in a brisk social comedy of changing times and it is not until the play's ending an act later, with the suitcases in the hall and the tears oddly enough in the eyes of the one man not truly affected by the sale (the neighboring Pischik), that we realize we are already past the watershed.

This is a production of rare and

remarkable insights, superior in almost every way to the recent National Theatre revival; yet it is no discredit to the present performance of Bernard Miles that I left it inevitably thinking about the last Firs I had seen: Sir Ralph Richardson, whose death was announced while I was in China. With that death we have lost perhaps not the Prospero but certainly the Merin of our theater. Of the four great actor-knights of the British classical stage in this century, he alone dealt directly in magic. He was Priestley's supernatural inspector, and when he came to call you always knew that there was going on something rather more than met the eye. How wonderfully fitting that his final appearance should have been in a play at the National Theatre about his beloved fireworks, but also a play that looked as though it was going to be about a man witnessing a murder and turned out in the end to be about nothing less than Italy at war. With Richardson gone, the "inner voices" are ever going to sound quite the same again.

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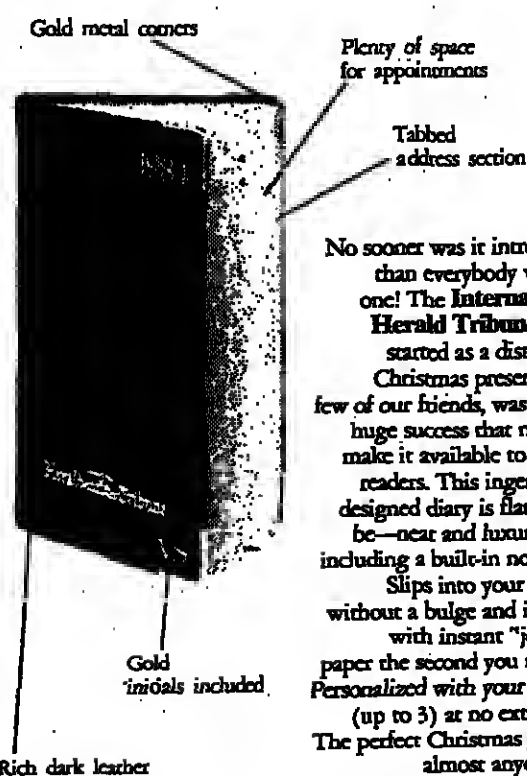
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INSIGHTS

Silicon Valley Is Shaken by a New Tale of Espionage

By Robert Lindsey

New York Times Service



A man identified as James Durward Harper Jr., an accused spy, is shown in a picture taken in the mid-1970s.

SAN JOSE, California—In what used to be a lush agricultural valley, where speaks of almost anyone could become a millionaire, James Durward Harper Jr. and William Bell Hingle were among the losers.

Now Mr. Harper is accused of espionage, and he has accused Mr. Hingle, one of the first of the entrepreneurs who came here two decades ago and helped create the high-technology industry, of complicity in a plot to send U.S. military secrets to the Soviet bloc.

Much remains to be unraveled about the espionage case. Mr. Hingle has not responded publicly to the accusation, although members of his family say he denies it. But the case has shaken as never before the community of 900 or so industrial companies near here.

Long regarded as the world's foremost center of electronics research and development, the area has become known as Silicon Valley, from the silicon, a derivative of common sand, that is used to make the tiny electronic circuits that drive modern computers, missile guidance systems and various other things, from clock radios to electronic video games.

Before their investigation is over, federal officials say, they expect other people here besides Mr. Harper to be arrested for illegally providing data about American technology to hostile countries. At least 35 espionage cases are being investigated in California's computer-chip industry, a U.S. official was quoted as saying last week. He added that "the valley has become a hotbed of spies, trained in the latest aspects of high technology."

Mr. Harper's lawyer, William Dougherty, says his client has admitted the espionage and has identified at least six persons whom, for a fee,

provided data that Mr. Harper later sold in Polish agents. The Federal Bureau of Investigation says the Poles turned the materials over to the KGB, the Soviet intelligence agency.

According to security specialists and others in Silicon Valley, the investigation of Mr. Harper and other recent espionage cases in California's military-related industry have demonstrated the vulnerability of U.S. technology in foreign hands, the weakness of security measures at some companies and the apparent ineffectiveness of federal counterintelligence in protecting the technology.

Local police say that in 1978 federal agents ignored a tip that an American was selling important technical data to the same Polish agent who was accused this week by the FBI of directing Mr. Harper's espionage activities.

Moreover, the security specialists here say the Harper case has provided new evidence of how, while high technology has created huge fortunes

for some people, a few others turn to technological espionage to accumulate their fortunes. One law enforcement source said that after a period in the Carter administration when relatively low priority was given to the problem, federal agents are now investigating at least a dozen cases of possible foreign espionage in Silicon Valley.

"What you've got in the valley is a very aggressive group of overachievers," said John D. Shea, a security consultant to industry and the Central Intelligence Agency. "It's a highly motivated, fast-track, materialistic environment; most people live far beyond their means; there are more Ferraris and Mercedes in this area than anywhere in the world." In such an environment, he said, some people sell secrets to keep up with the crowd.

In an affidavit made public by the Justice Department, Mr. Harper is accused of delivering technical data about the Minuteman missile system of such importance that Yuri V. Andropov, now the Soviet leader and then the head of the KGB, gave awards in the Polish agents who received the material.

It is alleged that Mr. Harper obtained the material from his wife, Louise, who had a "secret" security clearance at a company where she worked, Systems Control Inc. She died of cirrhosis of the liver in June at the age of 39.

According to the affidavit, Mr. Harper said he first provided data about American technology to the Poles in 1975, after being introduced to them by Mr. Hingle in Warsaw.

It also quotes him as saying that at a 1979 meeting in Geneva with Mr. Hingle and Zdzislaw Prydzioz, a lieutenant colonel in the Polish intelligence service, it was agreed that proceeds from the sale of documents to Poland would be divided equally between Mr. Hingle, Mr. Harper and Mrs. Harper.

Mr. Harper is said to have admitted traveling to Europe often in 1979 and 1980 with documents sought by Polish agents and receiving more than \$250,000 from them.

The affidavit says an unidentified former Polish intelligence agent, apparently a defector, corroborated much of Mr. Harper's story. But the account of his espionage comes largely from statements that Mr. Harper made anonymously to the Central Intelligence Agency in a strange, unsuccessful attempt over two years to become a double agent with Polish agents.

According to Mr. Dougherty, Mr. Harper's attorney, a man who identified himself as "Jay" and who turned out to be Mr. Harper called him at his office near Los Angeles in September 1981 and asked for a meeting. He said he had chosen Mr. Dougherty because he had read in a book about his role as a defense attorney for Christopher John Boyce, who was sentenced to 40 years in prison for espionage in 1977, subsequently escaped from prison and in 1981 was recaptured.

At the meeting, Mr. Harper agreed to turn himself in only if he was guaranteed immunity from prosecution. At subsequent meetings, he provided statements in response to questions from the CIA about his espionage activities. Mr. Dougherty said that in March 1982 Mr. Harper named Mr. Hingle and at least one other person in Silicon Valley who he said were involved in the operation.

Bid for Immunity Failed

Mr. Dougherty said the FBI and the CIA somehow managed to identify "Jay" as Michael Malone, who is writing a history of Silicon Valley. "They've been around the winners, but they haven't done it. They have tremendous backgrounds, they know everybody. They've got their Mercedes and a few bucks, but the Valley has punished them as much as it has rewarded them."

"He is very flamboyant, always on the social circuit," Philip Gregory, an associate in an industry organization, said. "He's always got some kind of a deal, wheeling and dealing with everyone."

"I had him on a string of gossamer," Mr.

Dougherty said. "I couldn't break the string. I had no way of contacting him; he always contacted me. He said he wouldn't do anything without immunity."

Finally, federal agents, apparently fearful that Mr. Harper might try to slip abroad more than 100 pounds (about 45 kilograms) of documents that he said he had hidden, decided this month to arrest him.

Mr. Harper, who is 49, and Mr. Hingle, who is about 10 years older, were among the first of the engineers and entrepreneurs who came to this valley in the late 1950s and early '60s and joined in what would become a period of technological ferment that some writers have compared in importance to the beginnings of the Industrial Revolution.

Companies Went Bankrupt

Some of the two men's contemporaries, such as Robert N. Noyce, Gordon Moore, Charles Spork and Jerry Sanders, founded companies that made them hundreds of millions of dollars. In this giddy period of corporate risk-taking and rapid growth, even clerical workers and janitors who took employee stock options from fledgling companies became millionaires.

But neither Mr. Harper nor Mr. Hingle ever made it big. Both owned companies that went into bankruptcy in 1975. That is the year, the FBI affidavit alleges, that they first met in Warsaw with Polish agents.

Mr. Harper is a native of Fresno, California, who grew up in a small town north of San Francisco. He served in the Marine Corps as an electronics technician before being discharged, his lawyer said, for "psychological reasons." He then used his technical training to start a career in Silicon Valley, where he became a specialist on the power supply systems used in electronic devices.

Described by friends as an athletic, hard-driving womanizer who enjoyed gambling and taking risks, he started two electronics companies, but neither succeeded.

Mr. Hingle is a much more prominent figure in Silicon Valley. He came here in 1962 with his wife, Frances, who was also an engineer and who has since died, and helped establish what is now one of the better-known companies here, Siliconix. He left after two years, and over the next few years he established at least six other companies, some of which had modest success.

As years passed, Mr. Hingle, a short, portly man called "the man" by Mr. Harper, became an outspoken and colorful figure in the electronics industry. In 1972 he ran briefly as a Democratic candidate for Congress, and in public he often criticized American restrictions on the exports of technology to Communist countries, calling them useless and harmful to free trade.

"He is very flamboyant, always on the social circuit," Philip Gregory, an associate in an industry organization, said. "He's always got some kind of a deal, wheeling and dealing with everyone."

"Hingle was like a number of other pioneers who never quite put it together," said Michael Malone, who is writing a history of Silicon Valley. "They've been around the winners, but they haven't done it. They have tremendous backgrounds, they know everybody. They've got their Mercedes and a few bucks, but the Valley has punished them as much as it has rewarded them."

"The salient truth of Silicon Valley is that you've got to make the big score or it'll kill you. The hills around here are filled with people who are not famous like the guys we know about, but others who tried and never made the big score."

The Day 'Shultz Roared': A Turning Point

By Don Oberdorfer

Washington Post Service

WASHINGTON — A showdown meeting in the Oval Office on Aug. 4 between an angry Secretary of State George P. Shultz and a startled President Ronald Reagan restored the waning influence of the administration's senior diplomats and may have contributed to the resignation 10 weeks later of William P. Clark to a post outside foreign policy, according to administration sources.

On "the day Shultz roared," as it is known in the corridors of the State Department, no resignation was suggested or submitted by the secretary of state, who said later, "I'm not a believer in threatening to resign." But the weighty implications of Mr. Shultz's complaints about policy-making disarray, which he privately described as "a disgrace," generated alarm in the White House that Mr. Shultz would quit unless changes were made.

The appointment of Robert C. McFarlane to succeed Mr. Clark as Mr. Reagan's national security adviser places a bureaucratic veteran in charge of White House coordination of diplomatic and military policy, a shift considered likely to reduce the influence of ideology in foreign affairs decisions, tighten up their management and improve the State Department's position.

It places Mr. Shultz in a position to exert greater leadership in policy-making, but it is uncertain whether this cautious, careful man will choose to do so in the face of international and domestic concerns, including the approach of the 1984 presidential election. Among his close friends, it is an article of faith that Mr. Shultz will return to private life in January 1985, whether or not Mr. Reagan wins a second term.

Mr. Shultz's sudden arrival in Washington as secretary of state in July 1982 released tension and high emotion about U.S. foreign policy that had mounted while Alexander M. Haig Jr. was in the job. And it created great expectations that Mr. Shultz would bring stability and increasing success to U.S. diplomacy.

In his 15 months on duty, Mr. Shultz has made good to a large degree on the promise of greater calm and cohesion, at least at the State Department. But hoped-for successes have yet to develop in the central problem areas — U.S.-Soviet relations, the Middle East and Central America.

Mr. Shultz's consensus-seeking, back-room style of operating, his unexciting demeanor and aversion to controversy have removed him from the public eye to an extraordinary degree and left many officials, as well as the public, in the dark about what he is thinking and doing.

The flash point of irritation that prompted Mr. Shultz's Oval Office visit in August was the sudden decision, which State Department sources said was made without Mr. Shultz's knowledge or participation, to order U.S. naval maneuvers of unprecedented size and duration near Nicaragua.

Mr. Shultz had participated in earlier top-level discussions of the military exercises, and State Department aides took a prominent role in lower-level interagency meetings. Sources said it was Mr. Shultz's clear understanding that the National Security Council had sent the question back to a lower-level interagency group for further discussion.

With the issue unresolved in these committee meetings, Mr. Reagan approved orders for the maneuvers that were dispatched through military channels without Mr. Shultz's knowledge, the sources said. At the State Department it was believed that Mr. Clark and Defense Secretary Caspar W. Weinberger had executed an end run to advance the military activity.

Disclosure of the military plans in The New York Times on July 23, in the midst of a heated U.S. debate about U.S. policy in Nicaragua, infuriated congressional leaders, who had not been consulted or even informed about the maneuvers, and jolted nearly everybody else in official Washington — including the secretary of state.

Mr. Shultz trooped up to Capitol Hill with Mr. Clark to mollify angry legislators in closed-door briefings, without revealing that he was just about as upset as they were. Nonetheless, Mr. Shultz seemed to be "very frosty" with Mr. Clark at the Capitol, according to a person who saw them together there.

Privately, Mr. Clark disclaimed any intention to deceive or exclude Mr. Shultz, and he arranged for an aide to supply a copy of the maneuver orders to the State Department.

But for Mr. Shultz, the job of soothing Congress while seething inside was the last straw after a series of rebuffs from the White House, according to those who watched him then.

With two Israeli leaders in Washington for intensive meetings and much other business pending, Mr. Shultz waited for more than a week before expressing his dismay to Mr. Reagan.

In the meantime, the administration suffered a serious defeat in the House, which voted 228-195 on July 28 against undercover CIA aid to rebels fighting the government in Nicaragua.

The U.S. maneuvers were cited by House Speaker Thomas P. O'Neill Jr., Democrat of Massachusetts, as one of the chief reasons for this vote. Criticism from the public, the media and congressional leaders of both parties had

mounted to the point where the suddenly announced maneuvers seemed more and more a political disaster.

Time magazine's issue of Aug. 1 featured Mr. Clark on its cover against a backdrop of Central America with a foreground of bold letters: "The Big Stick Approach." Fifteen pages into the cover-story package was an article on Mr. Shultz, "Disappearing Act at Foggy Bottom," with a photo caption saying he was "too reticent to take control."

On Aug. 3, The Washington Post's White House correspondent, Lou Cannon, under the headline "President's Strong Man Stretches South," reported that Mr. Clark had emerged as the dominant figure in Mr. Reagan's Central American policy. That evening, Marvin Kalb, reported that "senior administration officials" believed that Mr. Shultz might leave the administration because of his increasing frustration and unhappiness.

Precisely what Mr. Shultz said to Mr. Reagan the next day in the Oval Office is unclear. One source said the two were alone, at least for a crucial part of the meeting. Another account was that they were joined by Vice President George Bush, Mr. Clark and some other senior White House officials, and that Mr. Shultz unveiled "a laundry list" of complaints, including disputes about diplomatic appointments and a "back channel" presidential message to Chancellor Helmut Kohl of West Germany, as well as the Central American maneuvers.

The impact of Mr. Shultz's objections was powerful, by all accounts, especially coming from a figure who had been remarkably relaxed about bureaucratic "nits" and prerogatives. "When he finally roared a bit, people were shocked," one official said.

Mr. Shultz's complaints about disarray in the making of foreign policy are reported to have been cited by high-level White House staff members who had been feuding with Mr. Clark for reasons of their own. In this way, Mr. Shultz's objections are believed to have played a role in the decision to shift Mr. Clark from a powerful foreign policy post to the Interior Department.

Another result was a White House decision to give the secretary of state greater access to the president, including a regularly scheduled series of meetings for just the two of them. Mr. Reagan has gone out of his way to see Mr. Shultz and his wife, Olive, socially. Last weekend's golf outing in Augusta, Georgia, is one of several occasions on which Mr. Reagan and Mr. Shultz have been together after hours.

Mr. Shultz was as surprised as everyone else by Mr. Clark's sudden move. Publicly, he had



William P. Clark

nothing but praise for Mr. Clark, and he sent him a warm letter noting that the secretary of state sits next to the interior secretary at the cabinet table. Some people close to Mr. Shultz, though, doubt that he can forget what happened over the summer.

If Mr. Shultz is to take a more forceful role, he will have to grasp the reins of leadership in a way that is uncharacteristic for him, several officials said.

Mr. Shultz's method, in part a legacy of his earlier experiences as a professor, a labor negotiator and a cabinet official in economic affairs, is to concentrate one by one on outstanding problems, meticulously analyzing the components of each and seeking insights into the central issues that can be broadly accepted as part of a consensus for policy and action.

This is careful, time-consuming and undramatic. It also leaves nearly everyone involved in the process with admiration for Mr. Shultz personally, whether or not the policy works. To an extraordinary degree, several officials said, Mr. Shultz is willing to give others credit for what he does, a trait that increases his effectiveness in the inner councils but obscures his role to outsiders.

"His idea of getting something done is not to have a press conference or to make a speech but to have a meeting with McFarlane or the president or with Weinberger, to get a study launched or to make sure that a presidential trip is going to accomplish the desired purposes," a Shultz associate said.

Perilous Trek Over Afghanistan's 'Ho Chi Minh Trail'

(Continued from Page 1)

group I was with varied between two and about 50.

The road from Terri Mangal to the Afghan border climbed steeply. After hiking up it for half an hour, I was exhausted. We would walk for another 10 hours that day, hiking through passes as high as 11,000 feet (3,350 meters). Shortly after crossing into Afghanistan, we came across five deserters from the Afghan Army. They were dressed in shabby clothes and wore colorfully embroidered pullover caps on their shaved heads. Two were barefoot. They said they had come from Kabul, and I thought of the miles they had walked over mountain trails and rocky paths.

We were on one of the main infiltration routes into Afghanistan: a Ho Chi Minh Trail of the mujahidin. Caravans made their way in both directions, to carry supplies into Afghanistan or to stock up in Terri Mangal. Camels laden with timber from the denuded hills on the Afghan side of the border plodded across to where new mud houses were being built.

Along the way we occasionally stopped at *chulkhams*, or tea-houses, that have sprung up for traveling mujahidin since the Soviet intervention. Usually, a meal of round, flat bread and greasy, soupy meat stew can be had at these tea-houses as well as a place to sleep on the floor.

These way stations symbolized the extent to which the jihad, or Moslem holy war, has become a way of life in Afghanistan. It struck me that if, as the conventional wisdom has it, Soviet forces are in Afghanistan for the long haul, then so, too, is the Afghan resistance.

Fields Cultivated

On the third day of our trek, the route took us past the abandoned hillside village of Jegdelek. It was one of the most severely damaged of the numerous bombed-out villages I saw. Gray bomb casings with Soviet markings, shrapnel, fallen timbers and rubble from the mud-and-straw houses littered the area.

Yet, corn was growing in fields outside the village. Obviously, an effort was being made to continue cultivation. I was told this was being done by the mujahidin to ensure food supplies. A local alliance of five mujahidin groups led by Jamiat jointly maintained a nearby way station. Formed two months before, the grouping included adherents of both the so-called fundamentalist and moderate mujahidin alliances that spun each other in Peshawar.

"That's okay," Homayun, the Jamiat representative, said. "They get along very well here." It became increasingly apparent at other stops that allegiances and rivalries in Peshawar often have nothing to do with arrangements on the ground inside Afghanistan.

I also found continued solid popular support for the resistance all along the way, although Jamiat fighters said rival factions had alienated the people in other areas. The group I accompanied made a point of paying for everything

provided by the tea-house owners or villagers who fed us en route.

The extent of popular support for the mujahidin, and anti-Soviet feeling, became more apparent one night when we made a wide detour after villagers told us that Soviet tanks were guarding a pass we intended to go through. We learned later that no tanks were there, only dead horses from an earlier ambush.

Eleven of us became separated from the rest of the group, which included the pack horses with all our gear, and we ended up stopping for the night in the open within 50 yards (45.5 meters) of an Afghan government militia post. The only weapon we had was a Soviet Makarov officer's pistol. In fact, we had nothing to fear.

The militiamen, in reality working with the resistance, gave us each water and a hard-boiled egg for dinner. And when it started to rain around midnight, they let us come inside the hilltop post and sleep in a corridor. When we left at dawn, they warned us of Soviet deployments.

Helicopter overflights frequently forced us to take cover. But they appeared mainly to be troop carriers and to be flying too high to bother us, even if they were interested. I began to look forward to the sound of their approach for the respite it gave me from walking.

Along the way we met more deserters. One man said he had walked all the way from Herat, near the border with Iran, and was headed back to his home near Jalalabad. A dozen traveling together were from different parts of the country. Another said he had been forced to serve as a guard at Kabul's notorious Pul-i-Charki prison. All said they had been press-ganged into the Afghan Army and had escaped at the first opportunity.

The routine of our walk was broken on the fifth day, when we forded the Kabul River at night to avoid being spotted by Soviet or Afghan government forces posted nearby. As we approached the river by walking down a long rocky slope, a local guide whispered urgently, "Mines!" and gestured with his hands to illustrate an explosion. I got the message and tried to follow exactly the footsteps of the person leading me down the path.

Heading for an Ambush

On the other side of the river we passed a group of determined-looking mujahidin armed with 10 Kalashnikov rifles and half a dozen rocket-propelled grenade launchers. They were heading for an ambush on the Kabul-Jalalabad road and exchanged with us the usual Afghan murmurs of greeting and encouragement: *man-deh nabashi* (may you never be tired) and *zendeh bashi* (may you have a long life).

Still separated from our horses, we walked on into the night for what seemed like hours up rocky slopes, seemingly not in the middle of nowhere. Then suddenly, we crested a hill and I stared at an astonishing scene. In a grove of trees by a rushing stream, dozens of Afghans sat or lolled on mats and blankets spread here and there beside stands selling food, tea, candy, cakes, even American cigarettes and Coca-Cola. Kerosene lanterns shined from poles marking each merchant's open-air tea garden, and portable cassette players blared a cacophony of mujahidin songs, popular ballads, poetry and religious chants. Loud voices and laughter mingled with the discordant music as a brisk breeze rustled the leaves overhead. Nearby, a bombed-out village lay abandoned, silent.

The scene struck me as surreal, but nobody else seemed to think it unusual. It was just one of the better established mujahidin way stations on the trail.

We learned that the rest of our group had already passed through, and we were off again at dawn. Our trek took us through more bombed and abandoned villages. Then, under a blazing midday sun, we set out over a vast, arid landscape of barren hills. We walked for six hours between sources of water in temperatures reaching 93 degrees Fahrenheit (35 centigrade).

We eventually caught up with the rest of our group and spent most of the next day resting in a grove of mulberry trees. As the horses grazed and we lounged in the shade, a steady traffic of Soviet planes and helicopters flew overhead. Then, after much solemn cleaning of guns, prying and payment of a "passer's fee" of 100 afghanis (\$1.16) each to a pair of guides, we struck out for Begram.

Nothing had quite prepared me for the walk into Afghanistan, and by now both feet were out of the sand. Every step was an agony as I hobbled to keep up with the rest of the group, which had swelled to about 50 with a dozen horses.

We made a detour across abandoned fields toward a mountain, on top of which we were told the Russians maintained a post. Unable to see a thing in the dark, I kept stumbling in the furrows and falling down, landing as often as not on spiny shrubs and nettles. It was all I could do to resist shouting out in rage and pain.

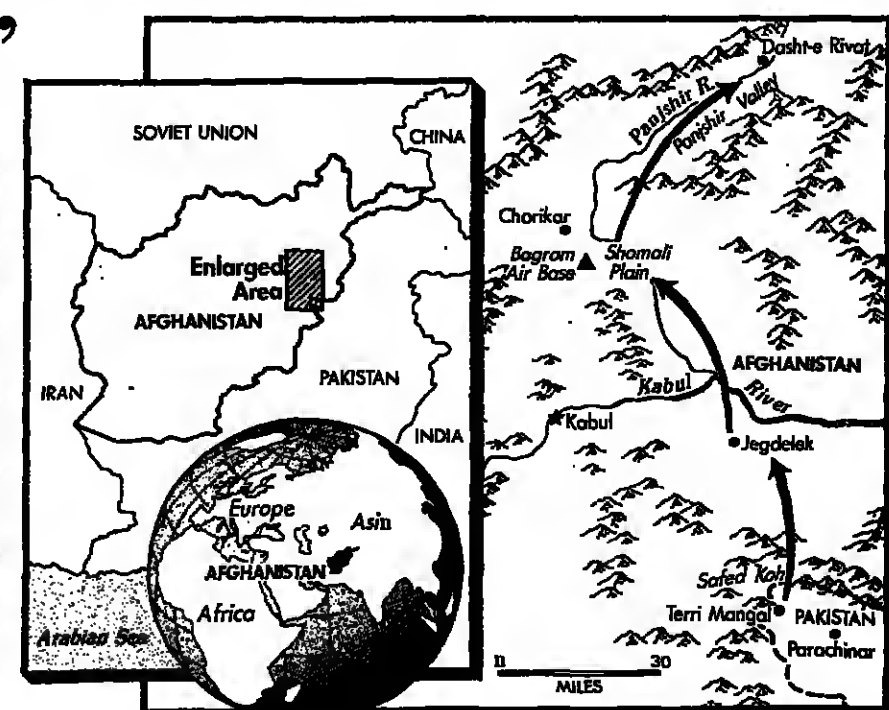
We reached the mountain and began a treacherous descent to a river that ran around the far side of it.

After we had gotten well away from the mountain, a small group of us waited on a hilltop for the horses and the others to catch up by a different route. We had a clear view of the fighting between two villages and watched as red and white tracers from machine guns flew in both directions.

The occasional boom of a rocket-propelled grenade or the thump of a mortar could be heard as we watched and waited. Later, I learned that the fighting was not, as I presumed, between Soviet troops and the mujahidin, but between local guerrilla forces of Jamiat and its archrival, the Hezb-i-Islami resistance group.

We moved on. As we approached a village we heard the sound of gunfire, now suddenly not very far away. The group began to run. To avoid getting separated, I held on to one end of Homayun's scarf as he fairly pulled me along. Staggering and stumbling, I ran on in the dark, at times nearly weeping with pain. Then, as we raced through a silent village, we noticed that our guide, Agha Gul, was missing. We were lost. Near panic gripped the other Afghans, and Homayun called out his name.

I wondered if this night would ever end. We plunged on this way and that, and luckily found Agha Gul. Villagers walking for their early prayers guided us in the right direction, often accompanying us to the next village. Dawn was



Arrows show route of correspondent's journey from Pakistan to Panjshir Valley.

starting to break when we ran into one village where we were to rest.

"Why did you come that way?" he hissed, pointing behind us. "You almost ran into a Russian post."

I had no idea how close it was, but now we were past Begram. The sun was up when we entered a Jamiat-controlled village and we were guided to a two-story house. We had hiked, clambered, stumbled and run for 12 hours, and I could barely stand. I collapsed onto a mat on the floor and fell asleep.

Friendly Village

I awoke a few hours later to the sound of jets and helicopters flying overhead. Bombs crashed, seemingly a couple of miles away. I lay still, too tired to move.

In the afternoon, following a meal, we moved out again. We rejoined our group, horses and all, and, at nightfall, walked through a heavily bombed area that evidently had once been prosperous. The ruins of abandoned two-story houses, some reduced to timbers and blocks of dried mud, looked eerie in the moonlight.

The next morning we were joined by the Jamiat area commander, Aga Sheerin, a sedate 27-year-old with a powerful build. He had been training for the Afghan Olympic wrestling team when the first Communist government came to power in Kabul in 1978. He quit to join the mujahidin. He said his main problem was a running battle with the area's Hezb-i-Islami faction.

The next day, after another night march, we

made our way up the valley whose entrance the house protected, and by afternoon we beheld our goal. From a ridge we gazed at the blue-green waters of a river flowing rapidly down the narrow valley. Green fields and orchards stretched up the valley floor, flanked by high mountains that rose almost vertically on either side.

This was the Panjshir, the valley that the Russians almost destroyed but could not take. Now it was again beautiful, and at peace. The way back turned out to be much easier. I set out a little more than three weeks later with Abdul Kuduz, 40, a former captain in the Afghan Air Force who served 12 years before defecting in 1978. Shadi Khan, 52, a rugged-faced former Afghan Army lieutenant, Gul Mir, 34, an affable former domestic cook in Kabul who rented me his pack horse, and two youths.

Shortly before we left, the Panjshir guerrilla commander, Ahmed Shah Massoud, concluded an agreement with one of two Hezb-i-Islami groups that had been battling Jamiat forces in the area south of the Panjshir. Thus, we were able to travel previously hostile territory and avoid the night march past Begram Air Base.

We reached my starting point of Terri Mangal in a blazing six days from the Panjshir. As we approached the border across the Saffed Koh plateau old with a powerful build. He had been training for the Afghan Olympic wrestling team when the first Communist government came to power in Kabul in 1978. He quit to join the mujahidin. He said his main problem was a running battle with the area's Hezb-i-Islami faction.

A breeze blew the smoke across a rocky ridge into the relative safety of Pakistan. From where it had come, the war was raging on. Next: A charismatic guerrilla leader.

NYSE Most Active

Stock	High	Low	Close	Change
IBM	174 1/4	173 1/4	173 3/4	+ 1/4
AT&T	102 1/4	101 3/4	101 3/4	- 1/4
GE	29 1/4	29 1/4	29 1/4	0
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4

Dow Jones Averages

Index	High	Low	Close	Change
Indus	1252 1/4	1252 1/4	1252 1/4	+ 3 1/4
Trans	100 1/4	100 1/4	100 1/4	+ 1 1/4
Comp	50 1/4	50 1/4	50 1/4	+ 1 1/4

NYSE Index

Index	High	Low	Close	Change
Composite	1252 1/4	1252 1/4	1252 1/4	+ 3 1/4
Indus	100 1/4	100 1/4	100 1/4	+ 1 1/4
Trans	50 1/4	50 1/4	50 1/4	+ 1 1/4
Comp	1252 1/4	1252 1/4	1252 1/4	+ 3 1/4

Tuesday's NYSE Closing

Val. of 4 p.m. \$2,500,000
Prev. 4 p.m. Vol. \$2,500,000
Prev. Consolidated Close 100.67/101
Tables include the nationwide prices
Up to the closing on Wall Street

AMEX Diaries

Index	High	Low	Close	Change
Advanced	100 1/4	100 1/4	100 1/4	+ 1 1/4
Uncovered	100 1/4	100 1/4	100 1/4	+ 1 1/4
Total Issues	100 1/4	100 1/4	100 1/4	+ 1 1/4
New Issues	100 1/4	100 1/4	100 1/4	+ 1 1/4
Volume	100 1/4	100 1/4	100 1/4	+ 1 1/4
Volume Down	100 1/4	100 1/4	100 1/4	+ 1 1/4

NASDAQ Index

Index	High	Low	Close	Change
Composite	100 1/4	100 1/4	100 1/4	+ 1 1/4
Indus	100 1/4	100 1/4	100 1/4	+ 1 1/4
Trans	100 1/4	100 1/4	100 1/4	+ 1 1/4
Comp	100 1/4	100 1/4	100 1/4	+ 1 1/4

AMEX Most Active

Stock	High	Low	Close	Change
IBM	174 1/4	173 1/4	173 3/4	+ 1/4
AT&T	102 1/4	101 3/4	101 3/4	- 1/4
GE	29 1/4	29 1/4	29 1/4	0
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4
Amgen	102 1/4	101 3/4	101 3/4	- 1/4

NYSE Diaries

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New Issues	100 1/4	100 1/4	100 1/4	+ 1 1/4
Volume	100 1/4	100 1/4	100 1/4	+ 1 1/4
Volume Down	100 1/4	100 1/4	100 1/4	+ 1 1/4

Standard & Pools Index

Index	High	Low	Close	Change
Indus	100 1/4	100 1/4	100 1/4	+ 1 1/4
Trans	100 1/4	100 1/4	100 1/4	+ 1 1/4
Comp	100 1/4	100 1/4	100 1/4	+ 1 1/4

Dow Jones Bond Averages

Index	High	Low	Close	Change
Indus	100 1/4	100 1/4	100 1/4	+ 1 1/4
Trans	100 1/4	100 1/4	100 1/4	+ 1 1/4
Comp	100 1/4	100 1/4	100 1/4	+ 1 1/4

AMEX Stock Index

Index	High	Low	Close	Change
Composite	100 1/4	100 1/4	100 1/4	+ 1 1/4
Indus	100 1/4	100 1/4	100 1/4	+ 1 1/4
Trans	100 1/4	100 1/4	100 1/4	+ 1 1/4
Comp	100 1/4	100 1/4	100 1/4	+ 1 1/4

12 Month High Low	Stock	Div. Yld. PE	12 Month High Low	Stock	Div. Yld. PE	12 Month High Low	Stock	Div. Yld. PE	12 Month High Low	Stock	Div. Yld. PE
174 1/4	AAR	4.4	11	144	144	144	174 1/4	AAR	4.4	11	144
174 1/4	ACF	4.4	11	144	144	144	174 1/4	ACF	4.4	11	144
174 1/4	AMC	4.4	11	144	144	144	174 1/4	AMC	4.4	11	144
174 1/4	AMN	4.4	11	144	144	144	174 1/4	AMN	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144
174 1/4	AMT	4.4	11	144	144	144	174 1/4	AMT	4.4	11	144

Tuesdays

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Both bulls and bears turn to the

Commodities Column.

has highly integrated a
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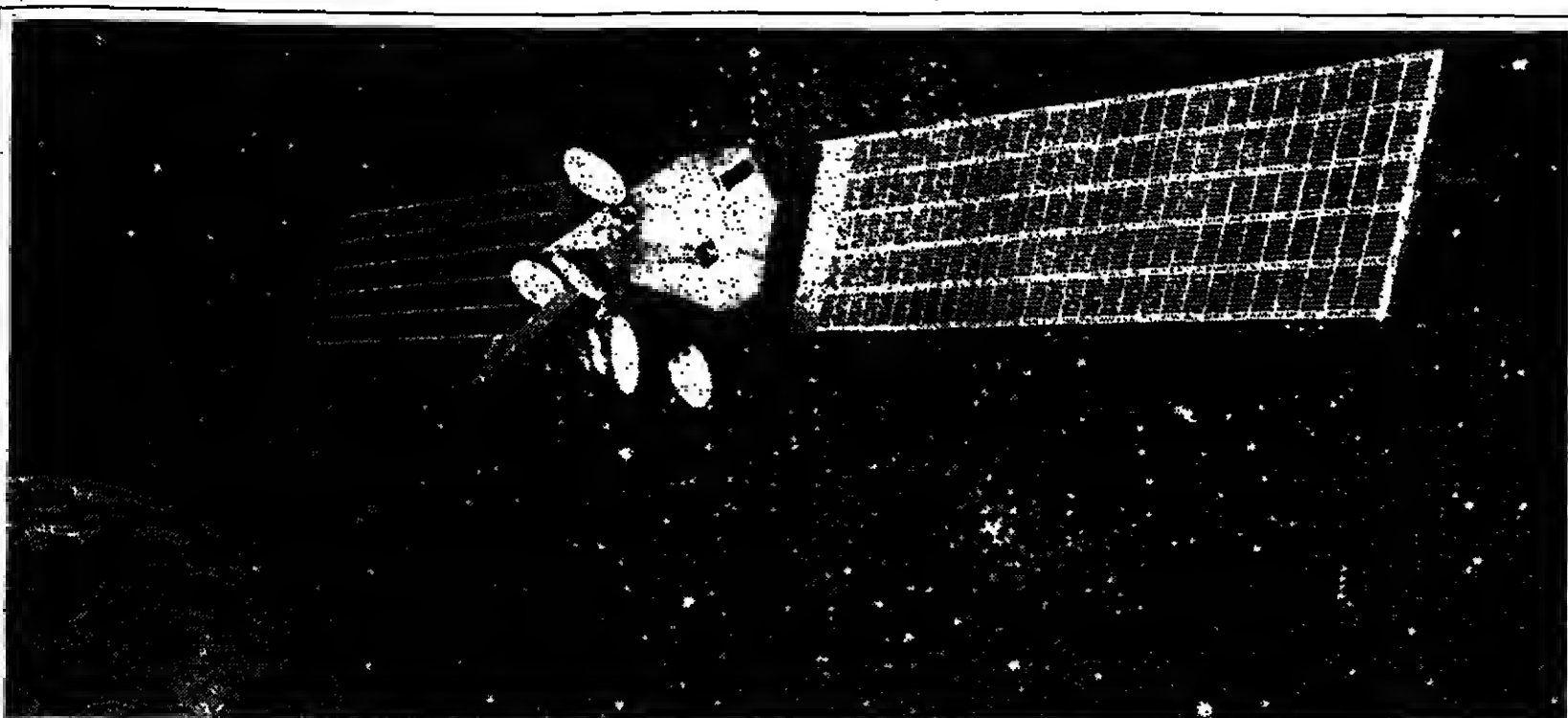
COMMUNICATIONS TECHNOLOGY

A SPECIAL REPORT — PART II

WEDNESDAY, OCTOBER 26, 1983

Part I Appeared
In Yesterday's Editions

Page 9



EUROPE'S SPACE HOPE — Model of European telecommunications satellite that will be launched aboard Ariane in 1986. The craft will be used for direct television broadcasting; its center is 3.5 meters high while the satellite measures 27 meters from tip to tip of its solar arrays.

International Satellites: Monopoly Under Attack

By Jonathan Miller

WASHINGTON — The global satellite-communications monopoly is under attack. For 20 years, the International Telecommunications Satellite, called Intelsat, has exercised virtually total control over international space communications.

Those communications have become very big business: Intelsat generates revenues of \$400 million a year and carries two-thirds of all international telephone calls and almost all international television transmissions.

Nobody has questioned Intelsat's technical virtuosity, and many have admired the cooperative spirit in which Intelsat has conducted its affairs. But the organization is now in flux.

In recent months, several organizations seeking a segment of the growing international satellite market have challenged the monopoly of the U.S.-created Intelsat.

Earlier in October, the 109 member governments of Intelsat met in Washington where they confirmed an American, Richard Colina, as the new director-general of the organization. Mr. Colina has pledged to resist assaults on Intelsat's monopoly. The Intelsat governments also unanimously passed a resolution affirming a "single global satellite system."

But there seems little doubt that major change is coming. The resolution by the top decision-making body may preserve Intelsat as the only system with global coverage — but it does not seem to inhibit the development of separate regional systems.

Strains in Intelsat have been developing for some time. One year ago, members of Intelsat disagreed sharply over the establishment of the European Telecommunications Satellite Organization, or Eutelsat.

The United States opposed this creation of Europe's national communications monopolies because it would compete with Intelsat for international traffic. The United States argued that such competition was incompatible with the basic Intelsat agreement, which the United States claimed established Intelsat as the sole global satellite carrier.

The dispute was settled with a compromise that allows Eutelsat to operate within Europe for five years, with possible extensions.

Additional challengers have threatened to try to compete directly with Intelsat in its most lucrative North Atlantic basin.

Two announced prospective competitors to Intelsat in the United States are the Orion Satellite Corp., a creation of several entrepreneurs from the cable television industry, and International Satellites Inc., primarily owned by TRT Communications, a subsidiary of United Brands.

There also are strong indications that British and Japanese industrial interests are interested in competing with Intelsat on both Atlantic and Pacific routes.

U.S. officials have not yet developed a clear position. "We do not think it would be appropriate to get into a protracted discussion [of Intelsat competition]

at this time," said Ambassador Diana Dougan, director of international communications policy at the State Department.

Privately, other U.S. government officials complain that they have little evidence on which to base a policy. A Commerce Department official complained that economic analysis of the possible economic harm to Intelsat was lacking and said: "What we need are facts. So far, we haven't got very many."

The stakes are high. The international market for satellite communications services are expected to more than double to \$10 billion annually by 1990.

Gauging likely economic harm to Intelsat is made complicated by unique characteristics of Intelsat's capital and tariff structures. But there is no question that membership in the Intelsat club is a good deal for the 109 national communications operators who participate. Most of the investment, \$332 million in 1982, comes from the biggest countries, in relation to an ownership share based on each country's use of the system.

On the revenue side, Intelsat operates as a cooperative, charging satellite use rates to cover costs and to produce a return on investment to those who finance the system. In 1982, return on investment was 15.9 percent. Given growth in international communications (telephone circuits more than doubled between 1978-1982), some analysts believe that by 1987, Intelsat could be handing two billion telephone calls a year in addition to television and other leased services, and be producing a return on investment of almost 30 percent.

Intelsat's direct revenues account for only a fraction of the total expenditures on international communications links. By far the biggest component is derived from charges for circuits of national carriers. These markups can increase the price to end users of international circuits to 10 times the fee charged by Intelsat.

Multinational corporations in particular favor diversity of international facilities. Some of the biggest boosters of Orion and similar projects have been U.S. banks and broadcasting organizations. Traditionally heavy users of international communications, they expect to depend even more heavily on such links in the future to tie together new generations of computers and to transport programs for new television services.

National prestige also is on the line. The Europeans and Japanese want to encourage their own space and communications industries. They see competition to Intelsat as providing an expanded market for their hardware. Some Europeans and Japanese want to end what they see as U.S. domination of the global communications infrastructure.

Potentially the biggest loser is the Communications Satellite Corporation, Comsat, the U.S. commercial participant in Intelsat. Comsat owns 24 percent of the global system and enjoys exclusive access from the

(Continued on Page 12)

Nations Fear Computer Crime Havens

By George Gudauskas

PARIS — With computer use and abuse rising worldwide, officials of most Western nations have a new fear — the development of "computer crime havens," where freewheeling manipulators can operate at will.

Computer and telecommunications systems are being developed so rapidly that both individuals and governments are frequently unable to comprehend or respond adequately to the changes that they will require.

Even now, most Western countries admit they have few effective measures in place to repress illegal, unauthorized or

always be detected. Most often it involves electronically stored and transmitted data and information, usually seen but not removed or destroyed. Even when crime is detected, it often goes unreported, according to experts, because the victims, frequently banks, fear bad publicity. Prosecution is made difficult, if not impossible, by the elusive nature of the supposed crime.

So, there is some secrecy around all this stuff of computer crime," Mr. Kenneth added. The 24 member nations of the Paris-based OECD are trying to agree on what exactly computer crime is, as part of the study that is probably the first international examination of its kind.

Officials of some nations, notably Canada and Denmark, completely object to the expression, saying what is called computer crime by the news media is nothing more than computer-related crime or computer-aided crime. Canada and Denmark prefer these terms. France is not sure. Legally, no such thing exists as computer crime, one Canadian official recently remarked, just as there are no such things as adding-machine crime, electronic-calculator crime, pencil crime, pen crime or paper crime.

But the Western countries are beginning to arrive at a broad definition of computer crime — any illegal, unethical or unauthorized behavior involving automatic data processing or transmission of data or both.

Computer crime — national or international — can in-

volve one or several acts, according to the experts.

It may include the manipulation of data, software and hardware, such as computer terminals. It can be computer espionage, software theft or even theft of computer time. Computers can be sabotaged and computer facilities can be used to commit an offense.

Most commonly in all countries it involves the theft of money by means of a computer. In the United States alone, the dollar value of computer crime has been put at \$300 million.

In London recently, £780,000 was lost by a bank when thieves intercepted a telephone call from a bank official or lawyer to "authenticate" forged drafts. The money, in Kruggerands, or gold coins, was then delivered to a bogus company.

So far, there has been no Great International Computer Robbery. But, as computer use increasingly reaches across national boundaries, officials are worried that they lack the measures to cope with computer crime. They are also worried that some public officials lack awareness of the broad ramifications of such criminality.

"One danger of computer crime is that very clever people can use a lack of legislation or a contradiction between two national laws to do something with international implica-

(Continued on Following Page)

Japan, Following Trend, Aims To Break Up Phone Company

By Peter McGill

TOKYO — In what could be Japan's biggest corporate breakup, the largest company, the Nippon Telegraph and Telephone Public Corporation, known as NTT, is losing its telecommunications monopoly and is targeted for dismemberment and privatization.

NTT, with assets of 9.9 trillion yen, sales of 4.34 trillion yen and profits of 369.6 billion yen for fiscal 1982-1983, easily dwarfs any other Japanese company. Its four research laboratories near Tokyo are the front line of Japan's push into data processing. There, work on ultra-high-speed chips — such as the Josephson junction and gallium arsenide — is challenging the U.S. grip on supercomputers. An NTT project to develop an "intelligent computer" rivals that of a Ministry of International Trade and Industry project for a "fifth-generation" computer. NTT's blueprint for an integrated-network system (INS) linking new electronic media via optical fibers is the most ambitious in the world.

A bill to divide NTT into a central telecommunications company and up to five regional companies will be put before the Diet for approval next year.

Somewhat ironically, NTT was modeled after American Telephone & Telegraph Co., which was broken up forcibly on Jan. 1, in the largest such

corporate divestiture in U.S. history, local telephone companies were split from the long-distance service after nine years of litigation.

In Britain, where the British Telecom monopoly is scheduled to undergo transfer from the public to the private sector in about a year, breakup was judged impractical. Instead, the government plans to sell a 51-percent share to a single buyer, for an estimated £4 billion.

Japanese officials said details of the NTT reorganization are sensitive. The main bill is already behind schedule, but it appears that NTT will be allowed to retain its four prestigious research laboratories. For an initial period at least, NTT will also be entrusted with building and operating trunk lines, giving technical guidance and collecting charges. Manufacturing telecommunications equipment, currently forbidden to NTT, is a possibility, according to officials, and there is talk of the company setting up an international business unit to develop sales and marketing expertise for exports.

After much wrangling, a compromise bill proposes that NTT be made a joint stock company free from Diet scrutiny and the need to ask for approval every time it wants to change tariffs. With 100 percent of the stock owned by the government, the revamped NTT would still, however, lack the freedom from government interference it had hoped for. This arrangement will be reviewed after 10 years.

In its present form the bill makes no mention of splitting up NTT, but behind-the-scenes lobbying by the ministry is pressing for a commitment to have off local telephone companies, in which 45 percent of the shares could be sold to private investors.

The only interested party to object to privatization in any form is the NTT labor union Zensetsu, whose president, Akira Yamagishi, said that the sale would only line the pockets of "greedy capitalists." Mr. Yamagishi is particularly incensed because the government has frozen a pay award to NTT as part of its austerity program, and NTT plans to lay off 50,000 workers from its 330,000-member payroll over 15 years as an attrition move.

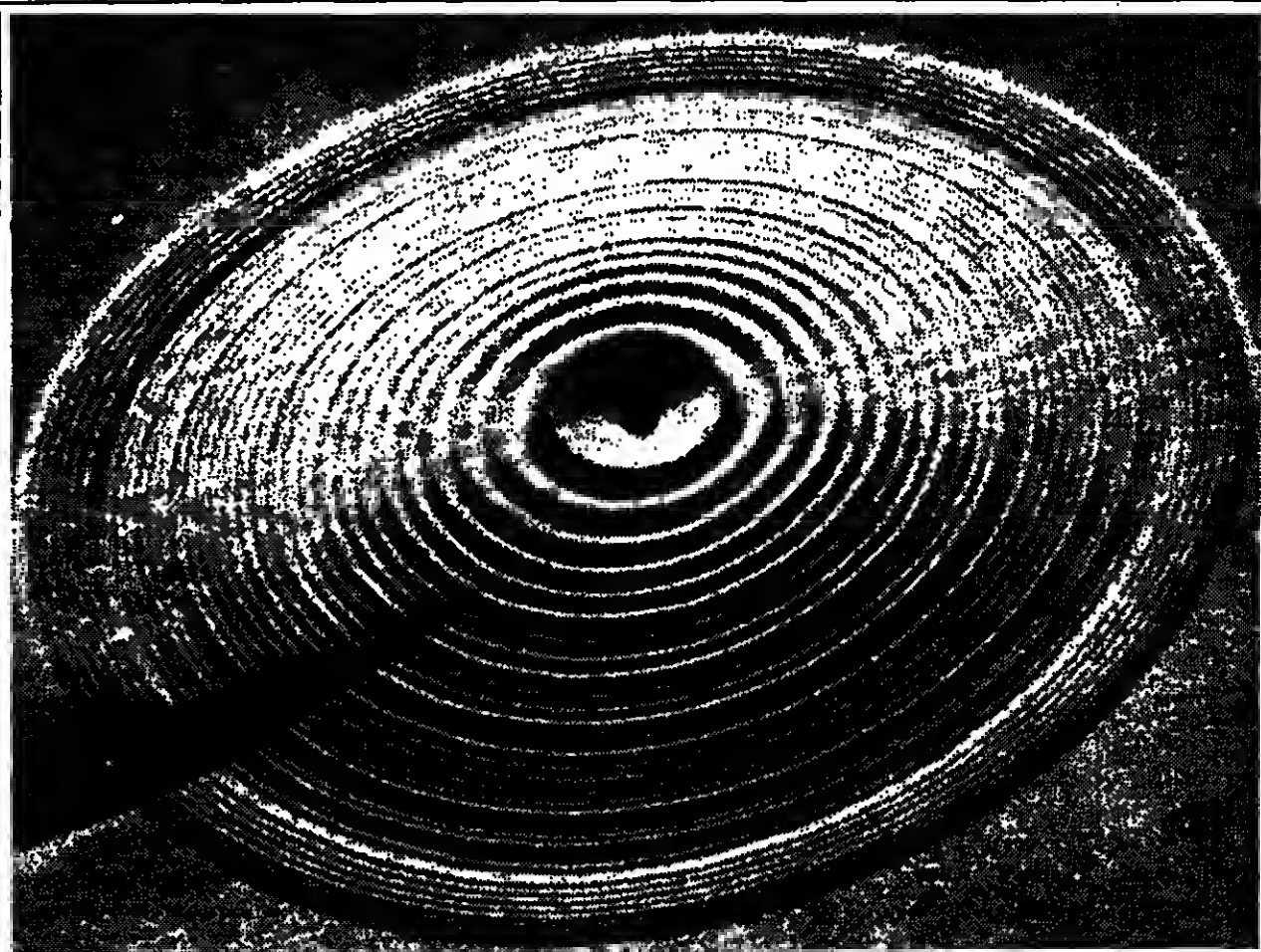
The ministry is urging liberalization in order to meet the explosive growth it predicts for the telecommunications and data-processing industries. NTT agrees, having outgrown its original purpose as a monopoly supplier of telephone and telegraph services.

"There is not really any deficit problem," Akira Nishii, NTT senior managing director, said. Outstanding debts are a little more than 5 trillion yen, but revenue tops 4 trillion yen, and with interest, overall accounts are in the black. "But the demand for telephone installations has been leveling off for the last few years to about one-third of the peak in the past," Mr. Nishii said. Most Japanese who want a phone now have one.

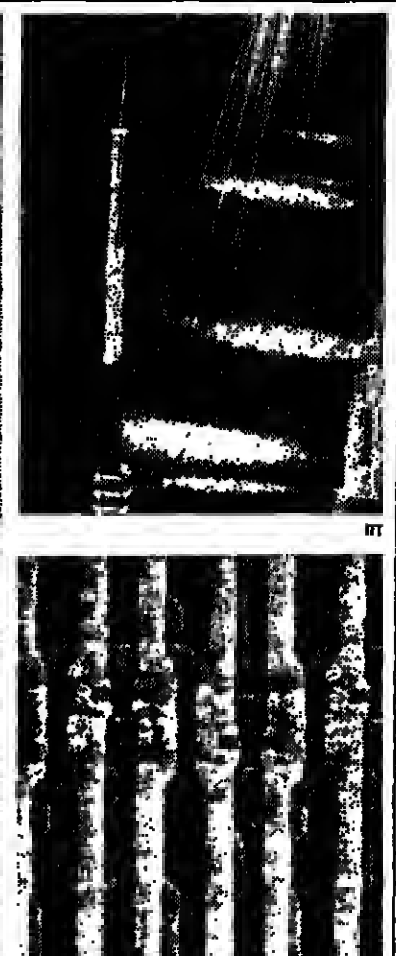
Telephone revenue has been growing at 3 percent to 4 percent, while the telegraph business is in such terminal decline that NTT is thinking of replacing it altogether with facsimile, favored by the Japanese because of their complicated writing system. While big profits have allowed NTT to cut its phone rates three times, revenue is expanding no faster than spending, and NTT could slip into the red. The fear voiced by Mr. Nishii is that "if we continue the way we are going we will become the second Japan National Railways, which loses about \$6 billion a year."

"Data communications and facsimile have been growing at between 10 and 20 percent a year," Mr. Nishii said. "If that is going to be the future trend, we

(Continued on Page 13)



CLOSE-UPS: A cross section of fiber, above, whose diameter measures .05 millimeters, shows the light conducting layers. Above, right, optic fiber cables and below, a microscopic enlargement of integrated circuitry.



Supercomputer Market: The Japanese Challenge

By Sarah Glazer

BOSTON — Japan's entry into the supercomputer market promises to stir up one of the few quiet corners of the computer industry. Current suppliers, all U.S. companies, expect the first challenge to take place this winter in Europe, a key market segment and one where some of the contenders is on home ground.

Two U.S. companies, Cray Research Inc. and Control Data Corp., both of Minneapolis, currently dominate the market for supercomputers — very powerful machines used for high-speed mathematical computation. According to Lloyd Cohen, an analyst with the Massachusetts market research firm International Data Corp., Cray claims 70 percent of the market with machines installed worldwide valued from \$4 million to \$11 million each. Control Data has 20 percent of installed machines, with the rest supplied by Denelcor Inc. of Denver.

"The market is very narrow in scope," Mr. Cohen said, with machines used only by "people who want to do a lot of number-crunching very quickly." This includes atomic energy commissions worldwide, laboratories that do weather predictions and oil companies that do seismic analyses.

"We've recently begun installing supercomputers in the engineering community as well," said Peter Gregory, Cray's vice president of strategic planning. He cited orders from the Swedish auto maker Saab and the U.S. aircraft maker Lockheed, both to replace expensive engineering models with computer simulations.

Japanese entrants are Hitachi and Fujitsu, which reportedly will install its first supercomputer this month in Japan.

Mr. Gregory said, however, that all-important benchmark test results have yet to be published and he speculated that Fujitsu will not be ready to mount its assault until "sometime in the next six months."

Europe, where both Japanese companies have strong distribution channels, will be their first target market, said Norman Dawson, Control Data's vice president of international computer systems. Fujitsu sells its conventional computers through Siemens in Germany and Imperial Computers in Britain, and Hitachi has marketing agreements in Europe with Olivetti and BASF.

Siemens is already calling on supercomputer customers, Mr. Dawson said. It is focusing particularly on accounts in France, where Cray was forced recently to delay delivery on two of four machines valued at \$5 million each because the government of French President François Mitterrand did not grant an import license.

If Fujitsu and Hitachi try to gain a market foothold by underpricing U.S. suppliers, "it could be a problem," Mr. Dawson said, because the small market is already "very competitive." In a round of discounting in past months both Cray and Control Data reduced prices significantly. And Cray announced a new supercomputer model this year that uses an advanced semiconductor memory technology to deliver comparable power at almost half the price of current models.

However, Mr. Gregory expects the Japanese entrants to price their products 20 percent below current levels. "The Japanese have never been known to be conservative on pricing," he said.

Another area in which U.S. companies will have to hustle to keep up with their new competitors is research. The Japanese government is sponsoring a supercomputer project with the professed aim of creating a machine 100 times faster than those produced by U.S. manufacturers.

With six member companies — Nippon Electric, Mitsubishi, Oki, Toshiba, Fujitsu and Hitachi — the project will have a reported budget of \$320 million during an eight-year period. About \$190 million will come from the member companies and \$130 million more from Japan's Ministry of Trade and Industry.

Cray, with 1982 revenues of \$141 million, plans to match this research budget on its own, Mr. Gregory said. He said that since its formation, the company has put at least 15 percent of its revenues into research and development. "People tend to fall over backwards over huge Japanese research expenditures," he said, "but we're putting in about as much on our own."

Control Data, a \$4-billion computer-related products manufacturer, has a research strategy that revolves around its announcement in August to form a new company, ETA Systems Inc. With a \$200-million investment and 100 engineers from Control Data, ETA has a mandate to design a new generation of supercomputers.

Control Data plans to own only 40 percent of the new company after additional money is raised independently and will market ETA's products. "We took the best brains in our company out of the corporate environment," Mr. Dawson said of the decision to form the new company. "We felt we had to do this to compete against the Japanese," he said.



This highly integrated electronic chip forms the heart of NTT's System 12 digital exchange. The inner dark square measures 0.25 square centimeters.

COMMUNICATIONS TECHNOLOGY

The Rules of the Game Change, Leaving Legal Uncertainties

By Delbert D. Smith
WASHINGTON — The rules of the game are changing. Satellite broadcasting and the delivery of telecommunications via satellite are creating legal uncertainties while fostering a milieu of entrepreneurial activity unparalleled in the history of broadcasting and entertainment transmission.

The institutional framework is also in transition as issues of ownership, management and control of telecommunication delivery systems become predominant in an industry whose foundations are being shaken by technological change.

A number of emerging commercial trends are pacing these changes. The first is the technological imperative that has taken us from terrestrial television distribu-

tions, through satellite delivery of programming for traditional networks, to satellite broadcasting directly to subscribers, which will eventually lead to high power, multipurpose satellite delivery systems and space platforms. These systems will deliver "infotainment" — a mixture of entertainment and information consisting of news, sports and special events, coupled with other services such as personal banking, shopping, security, electronic journalism and even video game delivery.

As evidence of this trend, direct broadcast satellite (DBS) services are scheduled to begin in the United States as early as next month with the inauguration of United Satellite Communications service. It will be followed shortly by Sky-

band and, in 1984, the system of Satellite Television Corporation, a subsidiary of Comsat. Following these early entries there will be a number of high-power DBS systems provided by some of the eight other DBS companies that have received licenses from the Federal Communications Commission.

The high front-end costs of major satellite systems has led to the creation of innovative multinational ventures. Trans-Atlantic satellite services, as exemplified by Brightstar, a joint venture between Visnews in London and a subsidiary of Western Union in the United States, will lead to continued changes in the dissemination pattern for news and entertainment programming. The Brightstar service transmits video signals on a totally integrated transmission

path using Intelsat's Atlantic satellite and related systems.

Lowered costs and simplified access procedures will stimulate the market for trans-Atlantic vision traffic for television programmers. This service, when coupled with the various DBS services and planned U.S. domestic satellite systems, can be seen as the precursor of the joint ventures of the future.

Of note is the fact that initial users of Brightstar include NBC (which will have its own Ku-Band domestic satellite delivery system) and the BBC (which is involved in DBS in the United Kingdom) and that other U.S. and European broadcasters will probably make use of the service to transmit television programming across the Atlantic on a regular basis. The multipurpose nature of the service is

demonstrated by the availability of the turnkey videoconference service. Brightstar represents the beginning of a creative developmental pattern based on the technological imperative that will grow and adapt as legal conflicts and compromises are reached in jurisdictions throughout the world on a variety of issues.

The major legal set of problems posed by the technological imperative, however, is that it very seldom is in synchronization with the institutional realities of the existing broadcasting and network systems. Questions are being raised in the international legal arena in areas of frequency usage, orbital arc locations, and creative content protection. There is concern with the regulation of foreign ownership in national broadcasting ventures as

well as with the latent questions that arise concerning cultural imperialism and censorship. Complicated issues of financing, program production and acquisition, copyright protection, and international telecommunications laws are changing the nature of the industry.

The second commercial trend is the transition from governmental systems to private-sector or hybrid institutional forms. The use of satellites for transnational communications was initially fostered by the governments of ocean states, which, through the traditional vehicle of treaty law, established the International Telecommunications Satellite Organization (Intelsat) in the early 1960s. Intelsat, which operates a system of communications satellites positioned over the Atlantic, Indian and Pacific oceans, remains the domain of government agencies and public bodies established under municipal law, in most countries the post, telephone and telegraph agencies.

The use of this monopolistic satellite system for international distribution of television programming, however, is now being challenged by private enterprise. The push by private-sector interests for access to international satellite transmission capacity has given rise to a widespread legal struggle over control of the gateways to this communications resource. In an advanced form, this struggle has manifested itself in the emergence of challenges to the international satellite monopoly itself by Orion and International Satellite, Inc., private companies that seek to claim their share of international telecommunications traffic.

While the joining of this battle for control of the space segment itself is probably still several years away, the struggle for access to Intelsat satellites is a legal phenomenon. In the United States, the position of the Communications Satellite Corporation (Comsat), the U.S. member of Intelsat, is currently under review by the FCC in the form of two regulatory proceedings. In Britain, British Telecom International (BTI), the United Kingdom counterpart to Comsat, faces the prospect within the year of a privately owned company, Mercury, gaining authority to access Intelsat directly.

The transmission of video materials by privately owned satellites among countries raises its own host of legal concerns. Section 14(d) of the Intelsat Agreement prohibits

(Continued on Page 15)

The author, a partner in the Washington law firm of Schneider, Harrison, Segal & Lewis, is an author and international lawyer specializing in high-technology.



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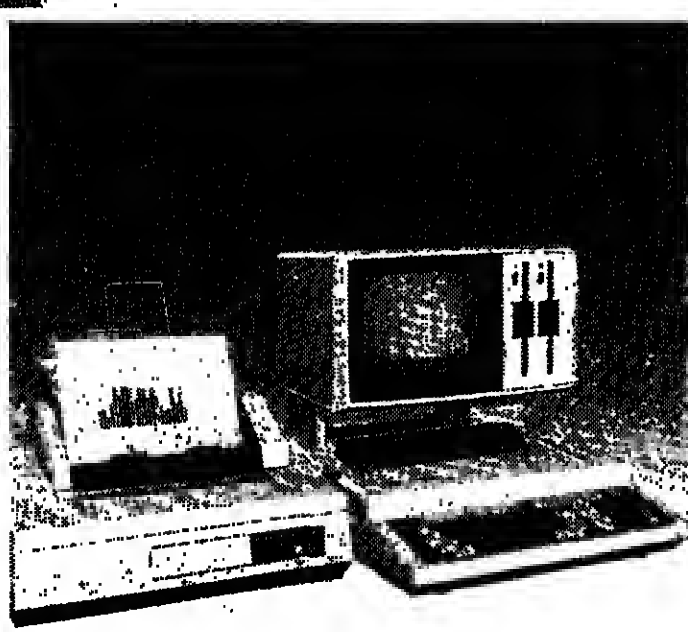
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Computer Crime Fears Grow

(Continued From Preceding Page)

ations," Martine Briat, an OECD lawyer who is working on the issue, said in an interview. Several nations, including the United States, are in varying stages of enacting or modifying existing laws on forgery, fraud and business espionage to encompass computer crime.

West Germany and Switzerland are considering changing some existing laws, as well as defining new offenses. Germany is looking particularly at the economic side of the issue.

In Canada, experts are leaning toward creating new sections of the law specifically to deal with computer crimes.

In the United States, specific laws have been adopted to curb computer crime, but only at the state level, and only in a third of the states.

On the national level, identical bills have been offered in the U.S. House of Representatives and Senate seeking to set penalties for people who tamper with, abuse or steal from federal computers or from private ones used in interstate commerce.

Other countries are examining a civil-law approach. Still others have yet to reach that stage and are trying to clarify the issues.

The result is that no common approach has emerged among the Western industrial nations for dealing with computer crime, whose losses are increasing each year as more and more computers are put into use throughout the world, experts say.

On the international scale, this poses problems of jurisdiction, extradition and prosecution in computer-crime cases. This is also why experts worry about the potential for computer-crime havens.

Loosely, they could be described as akin to tax havens — where money obtained in one country is sheltered in another to escape taxation.

Mr. Kenneth, an OECD administrator in the Information, Computer and Communication Policy division of the Directorate for Science, Technology and Industry, said that the full organization is comparing computer security standards among the nations and is trying to identify the legal questions arising from computer crime — "especially those with international consequences."

The legal questions alone would give most lawyers nightmares, since even in theft cases involving computers definitions of evidence and property rights often elude the experts.

Data and information, intangible when they are stored in a computer, are not usually recognized under legal definitions of ownership and property, according to Miss Briat, the lawyer in the ICCP division.

"Generally speaking," she said, "information and data from the legal point of view are part of the public domain, and everybody can have access to such information."

So, defining what kind of property or ownership rights exist on data and information is very difficult, she said, adding that "if you don't have this definition, ... you cannot say it's theft."

Mr. Kenneth, describing thievery with computers, phrased the problem succinctly:

"Stealing is depriving somebody else of some property; in this case, you are taking it and leaving it there at the same time," he said.

The OECD is trying to assemble enough information to make the member nations aware of the scope of the problem and possibly to achieve "a minimum consensus" on ways to deal with computer

crime in all countries, Mr. Kenneth said.

"It would be hopeless to try to say some naive statement like these 24 nations should all have the same law on computer crime," he said, however.

"It's obviously childish and can't happen because it has to fit their own constitution and legal system," he said.

Possibly, the member nations might agree on basic guidelines or recommendations — "soft law," as Miss Briat called it — to handle computer crime in the future, just as they agreed several years ago to guidelines to protect the privacy of personal information, Mr. Kenneth said.

If one nation had failed to adopt the guidelines to protect personal data, he said, it would have opened the door to those who might want to go to these "data havens" to collect such information.

A parallel exists for computer information and data, Mr. Kenneth pointed out, but they would be known as computer crime havens.



A Thomson-CSF technician in France prepares the communications payload of the TELECOM 1 satellite.

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COMMUNICATIONS TECHNOLOGY

Direct Satellite Broadcasting: Uncertainties Cloud Program

By Barry Fox

LONDON — Major European countries will fire satellites into space over the next three years to test programs for direct broadcasting into homes. But the program is not assured, and the variables are numerous and intricately linked.

One is unsure what programs the satellite system, known as DBS for direct broadcasting by satellite, will transmit, how and how much they will charge viewers to watch them and how many homes will be able to receive the signals. Also, no one has agreed on what reception equipment should be used.

DBS dates from the postwar period when the science fiction writer Arthur C. Clarke saw how German war rockets could reach into space. He suggested that a spacecraft in orbit 3,600 kilometers (about 2,200 miles) above the Equator would keep step with the earth's rotation and appear from earth to hover in a fixed, geostationary position. Since then, 20-year satellites have been parked in the so-called Clarke orbit to distribute radio, television, telephone and business signals around the world.

The relatively low-frequency radio waves used for AM radio can bend with the Earth's curvature or reflect off the upper atmosphere, so they carry over large distances from an earth-bound transmitter. But the high-frequency waves used to carry color TV, high quality sound and business data travel in more or less straight lines. They cannot get past the horizon. Even a radio or TV transmitter aerial covers only a relatively limited area.

It would be possible to transmit over a country or continent, by building an aerial thousands of miles

high. But this is obviously impractical. It is much easier to park a satellite in geostationary orbit. A program is beamed from the ground to the satellite, which receives the signal and transmits it to earth at a different frequency. The area that can be reached is broad.

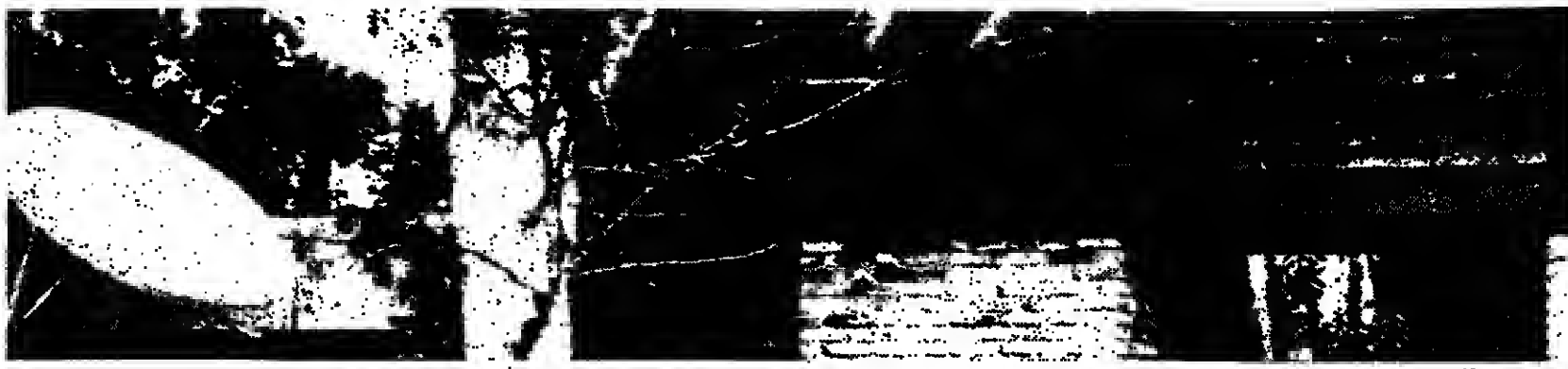
One technical problem is how to tailor the "footprint" of a satellite so that its signals do not spill over into countries that should not receive them.

The satellites in orbit are communications craft, and their receiver-transmitters or "transponders" are of relatively low power of fewer than 10 watts each. Power in space is at a premium, because it has to come from the sun falling on large sail-like solar panels that convert light into electricity. The radio and TV signals coming from space are weak, so the ground receiver stations need large aerials, shaped like radar dishes. They can be 20 meters (65 feet) to 30 meters across.

The system works well. It is how TV stations in different cities, countries or continents exchange programs. The plan now is to use high-powered transmitters that broadcast signals directly from the satellites (hence DBS) that are strong enough to be picked up on small domestic aerials.

In 1977, at a World Administrative Radio Conference in Geneva, the International Telecommunications Union allocated a band of unused radio frequencies, around 12GHz, for DBS. European countries each were allocated five channels and the radio conference engineers recommended around 200 watts per channel. They predicted that with this power in the sky and the receiver technology available in the mid-1980s, domestic viewers 99 percent of the time would be able to get good pictures from a dish less than a

(Continued on Page 16)



A backyard satellite receiving dish in a wealthy Los Angeles neighborhood.

United Press International

Caribbean, Central American Regions 'Pirate' U.S. Television

By Peter Kerr

New York Times Service

NEW YORK — U.S. satellite signals carrying entertainment and news programs intended for cable television viewers in the United States are being intercepted by a growing number of television stations throughout the Caribbean and Central America and broadcast without authorization.

State Department officials and spokesmen for the U.S. film industry call the practice "piracy" and said it was likely to spread to other continents in the next three years as nations in Europe, Asia and South America launch satellites for the broadcast of cable television programs. U.S. cable networks normally use satellites to distribute their programs across the United States.

The theft of satellite transmissions, the film industry spokesmen said, threatens to damage seriously the overseas markets for U.S. films.

Such losses, film industry spokesmen said, could have a critical impact on film companies that often depend on foreign sales to make their motion pictures profitable.

In Jamaica, for example, the government-owned broadcast company last summer showed "Folger's," "Missing," "Victor Victoria," "Rocky III" and other films that had not yet been released in Jamaica.

The television broadcasts, which were taken without permission from the satellite transmissions of U.S. cable networks, caused a 50-percent drop in revenues for Jamaican theaters, according to Donald Graham, a spokesman for the Jamaican movie theater industry. Last month, Mr. Graham said, the Jamaican government stopped the broadcasts.

In Belize, a Central American nation with a population of 150,000, there are seven privately run television channels that depend on U.S. satellites for their programming, according to Manolo Romero, a Belize government official. Their broadcasts include programs from U.S. cable networks including Home Box Office, Cinemax, Spotlight, Cable News Network, Satellite News Channel and the so-called "superstations," WGN-TV of Chicago and WOR-TV, based in New Jersey.

Jack Valenti, the president of the Motion Picture Association of America, which represents the major film studios in the United States, said: "These satellites are being used as instruments of grand theft. In the coming years most of the world's visual materials will be delivered by satellite. If copyrighted material can be used without the permission of its owners, not only could the overseas film industry be destroyed, the ownership of all intellectual material could be endangered."

The owners of the foreign television stations that receive the satellite signals, however, said that the practice is legal. They point out that the laws involving copyrights and satellite transmissions in their countries are often ambiguous or nonexistent.

At the heart of the problem, lawyers for both sides agree,

are international laws that have not kept pace with rapid changes in communications technology.

The legal status of U.S. television programs in the Caribbean and Central America, the lawyers said, is reminiscent of the relatively anarchistic state of the publishing industry in the last century before the United States established copyright agreements with other nations.

According to the Motion Picture Association, the pirating of U.S. television satellite transmissions has taken place in Costa Rica, Honduras, Panama, the Bahamas, the Cayman Islands, the Dominican Republic and Haiti, as well as in Jamaica and Belize.

The Caribbean and Central American nations are situated within the limited geographical area outside the United States where U.S. cable television satellite signals can be received.

The businesses that intercept the broadcasts range from individual hotels that show the programs in their rooms to major VHF, or very high frequency, stations that broadcast the U.S. films and television programs over the air.

Last summer the U.S. Congress included a provision in its Caribbean Basin Initiative to deal with satellite signal piracy. The initiative provides a wide range of economic benefits to nations in the area, including duty-free access to U.S. markets.

Under the new provision the president is authorized to withhold benefits to countries where television stations re-broadcast programs transmitted by satellite without the consent of the programs' owners. A spokesman for the State Department, Gerald Rosen, said that the United States was studying television broadcast practices throughout the region.

"This is a practice we should not tolerate," said Representative Marty Russo, Democrat of Illinois, who sponsored the provision. "If you allow one country to get away with this, others will. It is our obligation to protect the property rights of our citizens."

But executives of foreign television stations that use the satellite signals said they saw the practice in a different light. Some, who were reached in a sampling of foreign television executives, said they would be willing to reimburse U.S. companies for the use of their programs but that the Americans were unwilling to enter into agreements. In the meantime, they said, the United States had no right to stop them from using the broadcasts.

"The United States won't be able to impose its laws on the rest of the world," said Frank Santomenna, the executive vice president of Rexsa, a cable television company in Panama with 5,000 subscribers. Some owners and managers of the stations argue that they are giving the residents of their countries their only chance to share in the abundance of information and entertainment that until recently was available only to more wealthy nations.

"People living on our island have traditionally been isolated," said Walter Bussenius, the director of Tele Haiti, which operates a cable television service in Haiti that offers news and other U.S. cable television programs to 7,000 customers. "Now when [President Ronald] Reagan speaks on television our people see him instantly. It is our window on the world." One possible solution would be for cable television networks to scramble their satellite transmissions. Home Box Office plans to start scrambling its signal later this year. But members of the Motion Picture Association said the scrambling systems may be too expensive for most broadcasters to use, and not effective enough to thwart highly professional pirates.

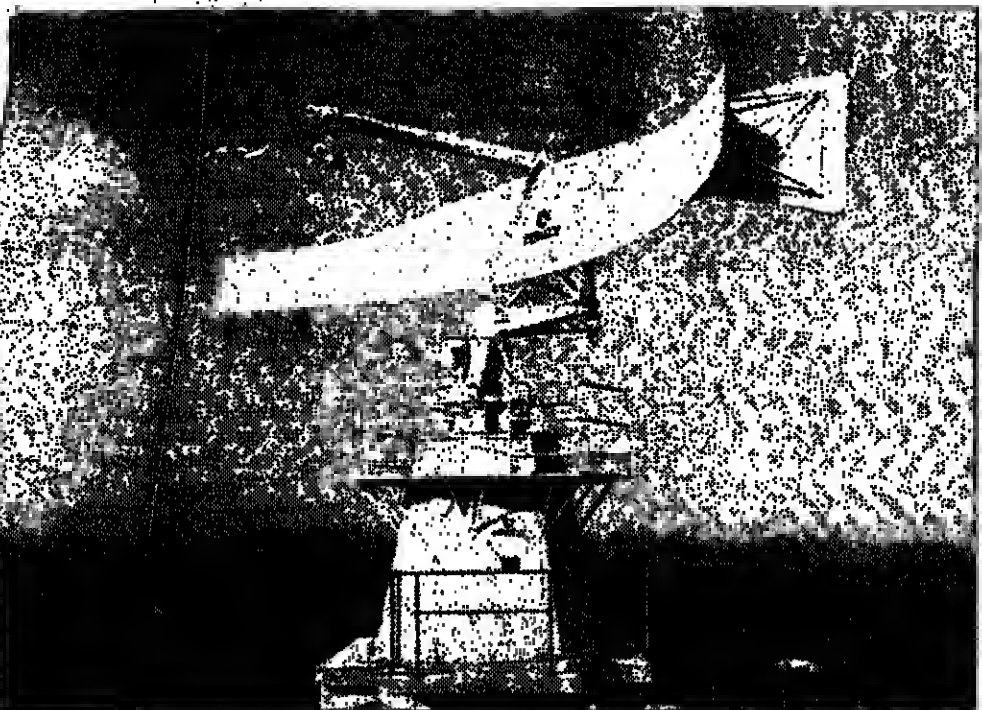
The technological changes that made the problem possible can be traced to 1975 when Home Box Office, the cable network owned by Time Inc., first began distributing programs by satellite. Cable television systems across the country began to receive movies and other shows picked up from satellite transmissions by dish-shaped antennas.

The satellites that are used for cable television broadcasts generally orbit in a fixed position in relation to the Earth. At least a half-dozen U.S. satellites are used by cable television broadcasters, but the one that handles the most cable television programming is Satcom III-R, owned by RCA. The satellite transmits signals that can be picked up in the continental United States, the Caribbean and Central America. Residents of more than 250,000 homes in the United States have installed the dish antennas on their roofs or in their backyards, to pick up cable television programs for free. In the United States it is a matter of dispute as to whether they are breaking the law, and there have been few prosecutions of people who have erected the dishes.

Approximately two years ago some people who were outside the United States but still within the area reached by U.S. satellite signals began to use this new source of television programming that, it seemed to them, was as free as the air.

"Our clients have really gotten to like the shows," said Fernando Batalla, the general manager of Cable Color Television, a cable television system with more than 4,000 subscribers in San Jose, Costa Rica. In addition to the U.S. movies and sports available on his cable system, Mr. Batalla said, Costa Rican television viewers receive U.S. cable programs on five VHF and one UHF, or ultra high frequency, channels.

More than 25 satellites designed to transmit television programs are scheduled to be launched in the next three to four years. They include satellites planned by France, West Germany, Brazil, Japan and Saudi Arabia. The new satellites will have "footprints" that cover most populated areas of the earth and will broadcast a tremendous amount of copyrighted material.



This Thomson CSF radar unit surveys river and coastal shipping in the Channel region of France. Canada has ordered the system for traffic in mouth of the Saint Lawrence River.

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COMMUNICATIONS TECHNOLOGY

Global Satellites:
End of Monopoly?

(Continued From Page 9)

United States to the Intelsat system, under the terms of the 1962 Communications Satellite Act. Currently, virtually all Comsat's profits are attributable to its international satellite franchise.

Comsat has been joined in its battle by a large number of communications authorities abroad, known generically as post, telephone & telecommunications authorities, or PTTs. They see any encroachment on Intelsat's monopoly as a potential threat to their own longstanding national control of communications.

Particularly outspoken in their support of Comsat have been PTs from developing countries that typically have not allied themselves with the United States on international policy issues. The PTs claim that if Intelsat, with its internationally averaged satellite use rates, is weakened, then they will be forced to pay higher charges for international communications circuits.

This central argument of the Intelsat supporters is in essence identical to that advanced by American Telephone & Telegraph Co. in the days before it gave up attempting to defend its de facto monopoly on domestic U.S. long-distance communications. AT&T's claim was that if competition were allowed, the competitors would take up lucrative routes, while abandoning rural and remote communities that failed to offer attractive profits. Translated into international terms, Intelsat argues that competitors would be happy to serve the United States, Japan and Europe, while ignoring the needs of countries like Sierra Leone, Jamaica and Malaysia.

According to Santiago Astrain, who will retire as Intelsat's director-general at the end of this year, if Orion and other competitors are approved, "the loss of large-stream traffic would substantially reduce Intelsat's revenues... during a period in which its capital costs would remain fixed. The result of such a course of action would be the impairment of Intelsat's ability to economically provide service to the rest of the world." Mr. Astrain's successor, Mr. Colino, expressed similar views, telling a recent meeting of satellite communicators that "you don't need a degree from the London School of Economics" to be able to perceive the economic threat to Intelsat.

But Thomas McKnight, president of Orion Satellite, said that the Intelsat case is fundamentally flawed. "If the past is prologue, as it most likely will be, Orion's success will result in actually increasing the use and success of Intelsat." Mr. McKnight said that although AT&T's long-distance market share had declined in the United States with the authorization of competitors such as MCI Communications Corp. and GTE-Sprint, AT&T is carrying more long-distance traffic than ever because the entry of new systems stimulated the demand for communications and resulted in the introduction of new and profitable services. Mr. McKnight promised that entrants such as Orion would benefit users by providing more options and lower costs. He denied that smaller countries would be adversely affected, and said they would actually benefit, because "there's nothing to stop developing countries from taking advantage of these new systems."

Similar sentiments are expressed by some Europeans. In September, at the annual conference of the International Institute of Communications in Aruba in the Netherlands, René Collette, head of the Communications Satellite Department of the European Space Agency, said that Intelsat's monopoly of trans-Atlantic space traffic was no more defensible than would be a monopoly of trans-Atlantic air traffic. And Andrea Caroso, secretary-general of Eutelsat, told satellite industry executives in St. Louis, Missouri, recently that if Intelsat faces economic harm, it will not be because of competitors, but because of Intelsat's own overly grandiose investment program, which now amounts to a cumulative investment in facilities of \$2.3 billion.

Meanwhile, massive investments are being made to provide even more sophisticated, capable and economic communications systems. Recently, Intelsat announced a new range of international business services, which will allow users for the first time to gain direct access to Intelsat's satellites from antennas mounted on the roofs of office buildings. AT&T has been moving forward with plans to build an underwater fiber-optic cable between the United States and Europe that will provide the first real terrestrial competition to satellite links.



U.S. Market to Get Videotex System

By Gary Arlen

WASHINGTON — When Viewtron, Knight-Ridder Newspapers' \$30-million plunge into electronic publishing, goes into service in the Miami area late this month, Americans will get their first commercial taste of videotex.

Nearly three dozen tests and market trials of videotex, teletext and similar services have been run in the United States since 1979. The activity mirrors that in Europe, where Britain's Prestel videotex system began operating in the same year.

Viewtron is the first U.S. effort that asks home users to buy a decoder and pay about \$28 a month to get a package of information and services, such as electronic home banking and shopping and electronic mail with flashy computer graphics on a specialized home terminal.

Several similar projects are being readied in the United States: Times Mirror Co., another media conglomerate, is to launch its Gateway videotex project near Los Angeles next spring, and Keycom Electronic Publishing, a joint venture of Field Enterprises (a newspaper and television group), Honeywell Computers and Centel (a telephone and cable operating company), will start its Keyfax Interactive Information Service in suburban Chicago in April.

CBS, I.C. Penney, Citicorp and others are fine-tuning their own plans for videotex operations. Dow Jones, IBM, The Source and

The writer, president of Arlen Communications Inc., a research firm, is editor and publisher of International Videotex Teletext News and TelexServices Report, newsletters based in Washington, and founder and of the U.S. Videotex Industry Association.

CompuServe have already staked important claims in the videotex business. And, most significantly, American Telephone & Telegraph has established its central role as an equipment supplier and network operator, a role expected to grow after the breakup of the telephone company.

Knight-Ridder and Times Mirror are recruiting other U.S. newspaper publishers to become affiliates of their videotex services, with an eye toward setting up electronic systems, probably after 1986.

Britain's Prestel system has been in beleaguered commercial service since 1979. France's government-backed Tëlématique program includes several videotex-type projects, such as an electronic phone directory system, which is putting hundreds of thousands of small Minitel videotex terminals in French homes; in addition the sophisticated Tëlétel videotex project is now expanding from the Velizy-Versailles area to other parts of France.

Germany's Bildschirmtext service, officially inaugurated in September but awaiting delivery of an IBM mainframe computer next spring before it can be fully implemented, represents another ambitious step in the worldwide effort to launch videotex operations.

Throughout Scandinavia, in Italy, Spain, the Benelux countries, Canada, Brazil, Singapore, Hong Kong and Japan efforts are well advanced to bring videotex to homes and offices.

Most projects outside the United States are heavily backed by government communications agencies, with encouragement from industrial sectors seeking export markets for the hardware and software they develop for videotex.

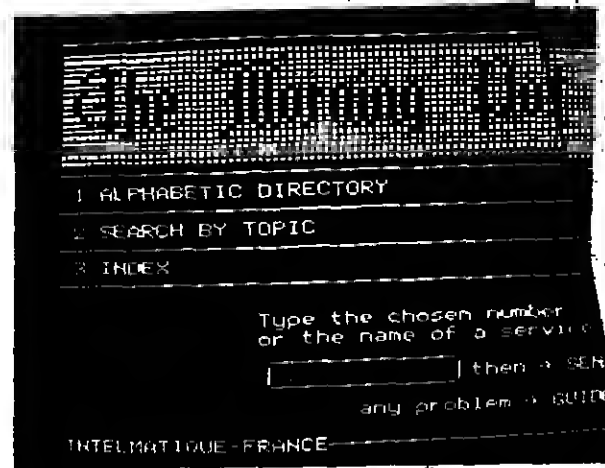
The term videotex applies to the technology: a two-way, interactive transmission system using specialized terminals plus existing home television sets linked to host computers. It also applies to the package

PROJECTED GROWTH OF VIDEOTE
AND TELETEX IN THE UNITED STATES

End of Year	Videotex Receivers	Broadcast and Cable TV Teletext Receivers
1984	8,000	10,000
1986	200,000	50,000
1988	1,150,000	3,000,000
1990	8,000,000	20,000,000

The table charts the estimated growth in the number of home equipped with videotex and teletext in the United States during the 1980s.

Source: Arlen Communications Inc.



of services: electronic publishing, home banking and shopping, video games.

The nature of videotex has changed during the recent years of experimentation. Originally conceived as an information retrieval system, videotex is now being developed as a medium for interactive transactional services, especially at-home banking, shopping and sending of messages.

British Telecom, which began creating Prestel aside ago, wanted to encourage greater phone use by offering services beyond standard (Continued on Following Page)

Major Losses Are Forcing Computerized Industries to Protect Data

By Theresa Engstrom

BOSTON — Growing revelations in the United States that unauthorized people including groups of teen-agers have gained access to supposedly secure computers have highlighted the issue of computer protection.

Until now, computer security experts said, it has been difficult to convince businesses that they needed to protect their data until a company has had a scare. "It usually takes a major disaster to make

them aware of the issue," said Fred Tompkins, chairman of the American Society for Industrial Security.

"The biggest problem is convincing management that information is a commodity, an asset like drums of chemicals or copying machines," said Brian Hollstein, a member of the security group.

The banking and insurance industries are the most concerned. Both industries, with their huge data bases of financial and actuarial information, realize that all their assets may be at stake.

International banks alone move as much as \$40 billion a day via electronic funds transfer. However, few cases against banks are reported.

"Banks' reputations are built on confidentiality," said William C. Grayson of the Bedford Group International in Maryland. "You're never going to see in the newspapers that a bank suffered a seven-figure loss."

To guard their reputations in a competitive marketplace, Mr. Grayson said, companies often choose not to prosecute violators to escape notoriety. Because no existing federal law prohibits unauthorized entry into a computer, prosecutors are treating those cases that do occur as wire fraud and use of telephone lines to obtain services without paying.

Experts estimate that only 15 percent of computer fraud and embezzlement cases are reported. The most widely publicized cases involve young computer hobbyists who have gained entry to large commercial computers. In instances where a computer is entered for fraud or embezzlement, authorities said, the culprit is likely to be an employee of the company.

In fact, people who are found to have gained unauthorized access are hired frequently by the victimized company so that the person's knowledge can be put to work for the company, not against it.

Until now, most companies treated the matter lightly, experts said. Even when computers were equipped with protective devices, users often did not bother to use them. One survey of large companies has estimated that only one in three users of large computers used standard protective measures.

"Computer security is a people problem," said Mr. Tompkins. Even the most advanced protection devices are useless, Mr. Tompkins said, if people refuse to use them.

The most common method of protecting information is to design a system that requires the user to follow a given procedure before the computer can be used. But this so-called procedural protection is often abused.

A computer may be shipped from the factory with a password system that is common to all computers made by that company, for instance, and the customer will not bother to change the password when the computer is installed. An intruder who knows the standard password can gain easy access to the system. "Companies have been sloppy," said Terry Feldt, a consultant based in San Diego, California.

Often a user trying a common code—for example, the QWERTY keyboard pattern that is on most English-language typewriters—will find files have been summoned from the computer's memory. In

other instances, users are given remote code numbers that correspond to geography. In the United States, for instance, the first three digits of a user's code number might be the person's telephone area code.

A breach of security can occur when computer operators write their private code numbers on paper, then tape the paper to the computer terminal. "I once walked out of a large bank with the security number," said Paul Ignosh, whose company, Stasis, makes security devices. "It was written on a piece of paper and labeled, 'computer access numbers.'"

Surprisingly, few companies put their computers in locked rooms. In many cases, physical security would solve the problem of unauthorized access. Now, in fact, with the popularity of microcomputers, a thief need only steal a floppy disk to gain access to a company's secrets.

Devices are appearing on the market now that offer protection for large, time-sharing systems. One company, Digital Pathways of Palo Alto, California, makes a device that will double-check the identity of a user on a packet-switching system. When a user calls into the computer via the telephone lines, the device intercepts the call. Then a voice synthesizer asks the caller for an access code and explains that the line will be disconnected while the computer checks its records for verification. The device will then dial back to the authorized user.

If the caller is illegitimate, the authorized user is alerted that someone is trying to use his account number.

The Stasis Security Key System is a device that looks like a house key but is a dynamic memory device. The key will block a microcomputer or a terminal. It costs between \$300 and \$350, depending on the size of the computer.

Another method of protecting information is to scramble it. With this method, a user assigned a password that allows him to unscramble the data.

Most password systems are designed so they can be changed frequently. But many companies do not bother to change the password. So a former employee or a legitimate user could gain entrance to the computer.

"Big locks on the computer room are the most scurrying you can do," Mr. Ignosh said.

For companies using computers for inside purposes, experts said the biggest threat to security is their own employees. A computer programmer can apply for a job, learn the company's routine, and within days have access to a computer.

The result can be "aid or embezzlement with the computer—in a company's own backyard," Mr. Tompkins said.

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Electronic Household: Futurists at Work Now

By Amiel Kornel

PARIS — Consumer trends are emerging that forecast high technology's role in the home of the future. Industry analysts and futurists are studying them to predict the how and when of the electronic home's arrival.

The issues are different from those that concern the automated office or factory. Consumer preferences and needs will be the determinant forces in the electronic home's evolution. Technological, commercial and political factors will only affect the pace of that evolution.

"The home is very different from the office," said Benjamin Compaine, an executive director of the Information Policy Program at Harvard University in Cambridge, Massachusetts. "In the office there is a very strict cost analysis. At home people don't make decisions in quite the same way. It is much more subjective."

Analysts are centering their attention on two facets of electronic home systems. The first concerns home communications networks, computer-based systems that join the consumer to an electronic world of information, personal contacts and long-distance services.

The second area of interest is the integration of all in-home electronic devices into a single, easy-to-use system. U.S. households seem ready to welcome the arrival of sophisticated electronic gadgetry. By 1995, from 15 million to 31 million U.S. households will have basic home information systems, called HIS, according to a comprehensive, 1982 study of 700 U.S. homes conducted by Booz, Allen & Hamilton, an international management consulting firm.

More than 80 percent of HIS users will be prepared to pay as much as \$32-\$35 per month for access to at least five services, such as home banking, video games and tele-shopping, according to the study.

One of the fundamental suppositions on which forecasts were based is that systems must offer film-quality images along with text. "The delivery of the system is important," explained Hans Schwimann, the firm's Paris-based vice-president. "That is what will attract users and make good publicity." Only cable can satisfy this requirement.

At present, information networks are typified in their most simple form by interactive videotex, the communication of text and rudimentary graphics between remote terminals and computers via standard telephone lines, and broadcast teletext, the one-way heretofore transmission of computer-stored information.

Limited operational systems and pilot trials have been under way in North America and Europe for several years. They have concentrated on the retrieval of pre-packaged information from large centralized computers. Public reaction to such systems and to the growing presence of home computers is helping futurists and industry analysts gauge consumers' priorities and requirements concerning electronic home services and devices.

One of the trends that may have the most far-reaching consequences is the desire of users to have access to computer programs, in addition to the pre-processed information that most systems now offer. This demand for local processing capabilities portends the need to decentralize computing power from distant, large computers to smaller ones in the home.

Home computers alone can obviously offer this possibility, but without the access to the enormous fund of data that is available in large information systems. The most attractive solution seems to be the use of tele-software, programs sent between computers through telephone lines or cable.

The first European network to acknowledge this necessity almost from its inception has been the

Austrian national videotex system. The Austrian telecommunications authority plans to run an "intelligent" decoder, called Mupid, to all of the system's users. The Mupid attaches to a standard television set, transforming it into a home computer.

"The system provides not only textual information and graphics information, but also programs," explained Hermann Maurer, director of the product's development at the Technical University of Graz.

"The Mupid is a personal computer which uses the network behind it." Another example is Micronet 800, a computer hobbyist-oriented service available on Prestel, the videotex system in the United Kingdom. Although only operational since March, it already logs more user accesses than any other Prestel member. Unlike the usual Prestel service, which employs a simple terminal, Micronet 800 sells modems and software that enable its subscribers to hook up through their home computers.

Tele-software is becoming Micronet's most popular product. "I think that in the short-term people will use this service because it provides them with software," said Tim Schoonmaker, marketing and sales manager. "That's what makes life or death in this for now."

Loading software into a microcomputer over the telephone line can be as much as 50 percent cheaper than buying it in a retail shop. It also means having ready access to a much larger variety of programs.

Micronet 800 offers mostly game and educational programs. Many observers believe that education and entertainment applications will be the driving forces behind the electronic invasion of the home. "In the short-term [the home systems market] will be entertainment-driven," Mr. Compaine said.

Consumer fascination with video games is fast becoming evident. Booz, Allen & Hamilton found that half the consumers in their study

were willing to pay an additional monthly fee for access to games. It has been projected that video games will enter 40 percent of U.S. homes within the next two years.

Educational programs have an important future in the home. While most are currently sold to schools, one estimate predicts that 70 percent of the educational software sold over the next five years will go into homes. Parents beginning to use computer-aided home learning as a necessary part of their children's education.

In addition to tele-software, electronic messaging and mail are expected to turn out to be most universally popular features of existing computer networks. Exchange of messages, often between people that do not know each other, is the most important attraction of computer networks, according to Murray Turoff, co-author of the "Network Nation," and one of the creators of the New Jersey-based Electronic Information Exchange System known as EIES.

"What videotex people don't realize is that people don't want data services; they want to communicate with other people," he said. Users of EIES employ the system as a personal communication network that can instantaneously bring them together with anywhere from one person to thousands of people.

He said that the most popular feature of The Source and CompuServe, two U.S. computer networks with 25,000 and 37,000 business and home subscribers respectively, is electronic mail. Therein lies the commercial future of home information systems, according to Mr. Turoff.

"A lot of corporate executives are not looking at basic human motivations," he warned. "They are going to lose their shirt."

The electronic mail facility is also one of the most popular services. (Continued on Page 16)

COMMUNICATIONS TECHNOLOGY

Japan Aims to Split Phone Monopoly

(Continued From Page 9)

will not be able to compete strongly with private industry. It is doubtful whether eventual privatization will greatly benefit foreign suppliers. Despite measures taken since 1981 to open NTT's shopping list to foreign firms, such purchases total only \$46 million, or 2 percent of NTT's annual buying.

NTT buys from a tight "family" of about 300 Japanese suppliers, of whom the biggest are NEC, Fujitsu, Hitachi, Sumitomo, Oki and Furukawa Electric. Orders are allocated in a fashion that foreigners say stifles the companies' pricing and production, while the joint research done by NTT with the companies would violate U.S. antitrust laws.

One of the big problems for foreign telecommunications firms is that their products must be compatible with Japanese networks. Motorola's much-vaunted breakthrough in 1982 to supply 45,000 pocket pagers to NTT, worth \$9 million, came only after years of work. Because NTT's technical requirements were different from anyone else's, the order was custom-made and cost Motorola a small fortune. "We just wanted to show we could do it," a senior Motorola executive said.

One area where NTT is at least moving in step with other national telecom services (such as British Telecom) is "value added networks." Private companies have already been licensed to resell to third parties the circuits they rent from NTT to transmit data, and during this session of parliament a bill will be submitted to do the same for voice. The "retailer" buys bulk circuits from NTT and then makes a profit by "enhancing" the circuits with added functions, such as speed, code or protocol conversions. Several companies are already making inroads in allowing otherwise incompatible computers and terminals to communicate with each other.

Another monopoly right that was lost recently was to supply the first telephone to Japanese homes and offices. Any approved supplier will do. Japanese customers can now choose from a variety of different telephone equipment, often advertised on television. Cable TV companies have also been given the "green light" to carry other services such as two-way videotex.

One of the major complaints of NTT is that as a public company it

gets lumped together with less successful government bodies and public corporations. One of the benefits of its public status should be exemption from tax, but because of its success and the government's indebtedness, NTT must pay a heavy levy on its profits.

Likewise a private company sees a return on effort in profit. But NTT's "bonus" for investment is determined by the performance of other public corporations, according to Mr. Nishii. "What we have done in the past 30 years is to combine the best parts of the bureaucracy and private industry," he said.

As an example, he cited the case of the "key phone," for which there is a big demand in Japan. NTT has a new key phone that is better and cheaper than the present one. "Of course people would like to replace their old one with a new one," he said. "However, NTT rents the telephones on the basis of cost accounting and the life cycle of the hardware, taking into consideration the rate of interest. So we face the problem that if people return the phone when only one half of its life cycle is used, we lose money. Private industry in the United States or Canada can recover the cost by increasing the charge for the new telephone."

The epitome of NTT's new technology is the INS project, which would entail spending 20 trillion yen to 30 trillion yen in the laying of optical fibers throughout Japan to carry digital "bit based" telecommunications. The backbone of the Japanese project — a trunk optical fiber line from Fukuoka in the southern Kyushu island to Sapporo in northern Hokkaido — is already approaching completion.

Optical fibers, in which Japan claims to be already the world's biggest producer, can carry not only thousands of phone lines in a single strand but also facsimile, computer data and various view data, such as NTT's "Caption" system for home banking and shopping.

"If I may add a little to the dream of NTT, today the cost of optical fiber per meter is about 10 times that of copper cable," Mr. Nishii said. "However, if we can reduce the cost to where it is only two or three times more expensive, it is possible we might start introducing optical fibers to every household. That day will probably come within about 10 years."

Full Videotex System to Be Launched in U.S. Market

(Continued From Preceding Page)

voice calling. By developing a system that allows customers to look up all sorts of information — news, sports, weather, financial data — offered by a variety of suppliers and available through a low-priced home terminal, British Telecom hoped to build an ancillary service that would keep the phone lines profitably buzzing. But, after four years, Prestel has about 35,000 customers, many of whom use Prestel as an efficient time-sharing system to reach into specialized data bases.

The British experience has offered valuable lessons to U.S. and other videotex developers. The latest videotex projects include a heavy emphasis on private videotex systems, intended to offer simple computer services within companies or as a sales tool to allow firms to communicate with customers.

For example, automotive companies are using videotex systems to let dealers know what cars are available with what options; British Leyland is using such a system in England, Buick is testing a similar service in the United States, and travel agents are using videotex to book tours through large vacation packages.

The other new twist in videotex development is the emphasis on

transactional services. Citibank, Chase Manhattan, Chemical Bank, Manufacturers Hanover and many others are developing electronic home banking services as part of their efforts to eliminate paper processing and speed up the financial flow. Banking consortiums have teamed with Knight-Ridder, Times Mirror and other U.S. videotex operators to make home banking an integral part of videotex systems.

American Express, which has been an active participant in Britain's Prestel system, is preparing financial and other services for U.S. videotex systems. Some brokerage houses are designing videotex financial services.

Merchandisers — especially mail order companies — are another important component of videotex projects. In West Germany, companies like Quelle and Otto have successfully found ways to sell merchandise through on-line ordering systems on Bildschirmtext.

The rapid upheaval in the microcomputer world has affected the direction of the videotex industry. Sophisticated microcomputer networks with enhanced graphics and truly interactive services are easily mistaken for what is now called videotex. Furthermore, the dramatic

drop in prices of home computers and telephone modems, called modems, is having an effect on videotex development.

Videotex terminals, with their high resolution graphics capacity, now cost \$600 and more in the United States — far above the price of off-the-shelf home computers. Indeed, many experts now foresee a natural overlap of videotex hardware with home computers, with appropriate videotex circuit boards being installed in microcomputers. Apple, IBM and others are already working in that direction.

This overlap between futuristic videotex service and today's home computer activity surfaces in current British systems such as Micronet 800 and Homelink. Both systems use standard microcomputers, equipped with special software, to give users access to the Prestel data base and to videotex home banking services. The hybrid system has helped expand the Prestel audience significantly.

Technical standards for videotex systems are in flux. Incompatible formats have been developed in France, England, Canada and Japan. And despite efforts by units of the International Telecommunications Union (especially its international consultative committee on telephone and telegraph), it appears that problems will linger.

Private Companies Rush to Acquire Cable Licenses in Japan

By Jack Burton

TOKYO — Despite Japan's reputation in the forefront of video technology, the country still lags at least a decade behind the United States in setting up large-scale cable TV systems in major cities. Plans are now afoot to change that.

Cable TV has existed in Japan for almost 30 years, but it has been used mostly to transmit regular television programs to urban and rural areas that suffer from poor reception, such as city neighborhoods surrounded by skyscrapers or villages in the country's mountainous interior.

The Ministry of Posts and Telecommunications, which regulates all broadcasting in Japan, has maintained tight control over the expansion of cable services, particularly two-way "interactive" cable.

Until the recently announced deregulation of Nippon Telegraph and Telephone, two-way cable, which offers everything from selective pay programming to electronic shopping in the home, posed a threat to the government-run communications monopoly. The cable restrictions were enthusiastically supported by commercial broadcasters, who viewed two-way cable as a potential rival.

In addition, the ministry wanted to curtail cable until the technology was developed domestically to operate advanced two-way cable systems that could rely on optical fibers and satellites. The telecommunications ministry and the Ministry of International Trade and Industry actively fostered this technology by sponsoring two pilot projects in the Tokyo and Osaka areas.

Based on the projects' technical success as well as the government's apparent commitment to deregulate NTT, the telecommunications ministry announced in late May that it would approve applications for two-way cable services under private operation. The ministry officially recognized one-way cable service in 1972.

Because the license grants the holder exclusive access to a designated territory, private companies, in anticipation of the ministry's decision, had already begun to submit applications for cable operations even before the ministry announced the new policy. Claim staking was particularly active for the Tokyo area, considered potentially the most profitable market in Japan. First last December was International

Cable Network, backed by the advertising agency of Hakuhodo; Mitsui and Co., the trading house; Tokyo's Odakyu electric railway line and more recently Viacom, the U.S. cable company. ICN initially sought a license for the affluent suburban community of Machida City in the southwestern part of the Tokyo metropolitan area and plans to set up a network of five metropolitan stations in other parts of the country.

Two commuter railway companies, Seibu and Tokyo, also announced plans to construct cable networks. By stringing optical fiber cables along their electric railway poles or laying the more conventional coaxial cable lines through the communications ducts along the rail bed, they could avoid protracted negotiations with local authorities in gaining right of way permission for the system's installation.

Another attractive feature about cable for the railroad companies is that it could boost business for the department stores, supermarkets and real estate companies that they also own. And the companies have a ready-made audience for cable because of the housing projects they have developed along their railroad lines. Tokyo, for example, is betting on acquiring a number of subscribers from among the 100,000 persons housed in its large complex outside Tokyo.

The Marubeni trading house has more ambitious plans to tie up with local partners in at least nine major cities to operate cable networks. For example, Marubeni is planning to form a partnership with the Uny supermarket chain and the Chunichi newspaper company in Nagoya, Japan's fourth-largest city. "We hope to eventually get 500,000 subscribers nationally, which will be enough to support satellite broadcasting," Osamu Masada, a Marubeni spokesman, said.

Other companies considering cable operations include newspapers, who hope to conduct computerized transmission of news copy, and major supermarkets and department stores, which are interested in selling consumer goods through the two-way system.

Their participation, however, could be ultimately eclipsed by the country's power companies, which possess the most extensive collection of utility poles in the country and thus can reach more households than the railroad companies, for example. Tokyo electric power has already said it is considering setting up a cable subsidiary to take advantage of its existing power supply network.

Even government agencies are likely to play a role in cable operations. Like the electric power industry, such state groups as NTT, Japan National Railways and the Japan Highway Public Corporation have extensive rights of way that would be needed if nationwide cable systems are ever constructed. NTT has already granted cable stations permission to lease the agency's circuits for broadcasts.

If these plans reach fruition, cable networks should be available to urban households by the mid-1980s. While 3.3 million households, about 10 percent of Japan's homes, now are wired to a cable system, the number is expected to grow to 5 million by 1986 and 10 million by 1990.

But several major obstacles lie in the path.

Although it is cheaper on a per-capita basis to install cable systems in Japan than in the United States or Europe because of Japan's high population density, the amount of investment needed is still large. Local banks, newspapers and retailers, who stand to reap the biggest benefits from community cable service, cannot afford to support the cost alone, which is why they have agreed to cooperate with large corporations that have the capital.

ICN, for example, estimates that it will cost 5 billion yen to lay coaxial cable lines, build a transmission station, buy programming and operate the Machida City network during its first three years. Marubeni projects that it could cost as much as 10 billion yen to wire 50,000 Nagoya homes, the minimum needed to make the system profitable. A cable network reaching all 2 million households in Tokyo would cost more than 175 billion yen, according to an advisory committee at the Telecommunications Ministry.

One way to spread around the costs would be to franchise operations. But the ministry has barred this for the time being. Although it gave tax breaks to encourage cable, it stipulated that all cable companies must be regional in scope and that they cannot sell information services to other cable networks under different licenses. The ministry also prohibited the consolidation of cable systems, which at present number 31,000 for one-way cable networks. The restrictions are believed to be designed to protect the interests of commercial broadcasters, who fear the competition from national cable networks.

Since the installation fee of 40,000 to 50,000 yen

that most cable companies are planning to charge will not cover the cost of the projects, they must rely on an average monthly service charge of 1,500 to 2,000 yen and advertising revenues to recover their investment as well as support operation costs. That means at least several years in the red for most cable operators.

And a big question mark hanging over the future of cable is whether enough subscribers will sign up to make such ventures profitable. Japanese households already pay a monthly fee of 1,000 yen to support the two state-run NHK channels, and viewers in such metropolitan areas as Tokyo have six other commercial stations to choose from as well. The program quality is good enough to make the Japanese the most avid TV watchers in the world.

Cable operators must find programming enticing enough to persuade viewers to spend more money to watch pay TV as well as break housewives of the habit of shopping twice a day in the neighborhood so they rely more on electronic shopping. Tokyo, for example, experimented with cable programming at one of its housing projects in 1972 but found that residents were not willing to pay for the service.

To help fill the void created by 10 to 30 channel cable systems, Marubeni last spring set up a joint company with Hakuhodo and Tohoku Shinsha, an importer of foreign films, to serve as wholesalers of video programs. The company plans to supply live broadcasts of sports and cultural events, foreign films and television programs as well as special films made in cooperation with domestic film production companies.

But regular television is not cable's only competition. NHK at the beginning of October started teletext broadcasts, which supplies the same sort of news and service information that cable plans to offer. Direct satellite broadcasts are also looming on the horizon, with an expected start-up date of 1989.

While the risk for cable operators is considerable, it is less so for the electronics industry. Even if cable fails to make a considerable foothold in Japan, electronics firms can continue to sell cable equipment overseas. Toshiba, for example, recently developed a new cable equipment to cooperation with U.S. television and communications for use to the United States as well as Japan.

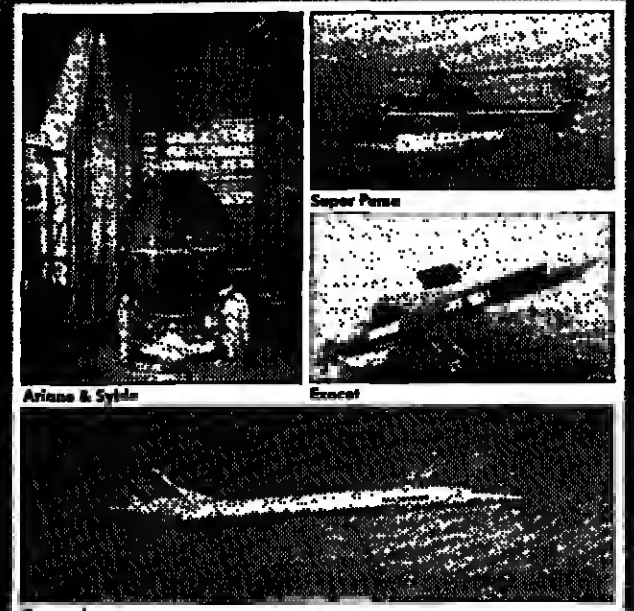
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COMMUNICATIONS TECHNOLOGY

Publishers Moving Data Processing Books Up Front

By Bob Kucsterman
The Associated Press

Stacey's bookstore in Palo Alto, California.

SALT LAKE CITY, Utah — From a few volumes about data processing hidden on shelves between calculus and differential equations, computer books have developed into one of the hottest items in the U.S. book business.

Piggybacked to the sales of small computers for home and business use, books about Apples and Commodores, Basic and Pascal are making fortunes for small publishers.

Sam Weller, owner of Zion Book Store in Salt Lake City, Utah, for instance, moved computer books from the back shelves to the front of the store last spring, after two years of rising sales. They occupy eight shelves and account for about 5 percent of sales, he said.

B. Dalton Bookseller, a leading U.S. chain, said its outlets stock 500 titles of computer books. Waldenbooks, another big chain, said it has stocked computer books for about five years. "We had good sales last year, and we'll triple them this year," said Michael Meyer, director of merchandise buying for the chain, based in Stamford, Connecticut.

Computer books will account for about 3 percent of Waldenbooks' sales, which is almost equal to sales of cookbooks, Mr. Meyer said. "Cookbooks are a very substantial part of our business," he said.

One publishing executive recently estimated that 2,400 computer books were in print and that most of them had been published in the past 18 months.

Mr. Weller said people who used computers as a hobby had started the increase in sales of computer books, but businesses are buying books now.

Joseph Esposito, director of computer publishing for New American Library in New York, traced the growth in the computer book market.

First, he said, "hackers," a term for computer enthusiasts, bought books. Then business people began studying word processing. Now, Mr. Esposito said, people interested in the computer as entertainment will begin buying books. "This generation sees the computer as a part of life, as an appliance like a Cuisinart, telephone, television and air conditioning," he said.

Computer books are said to have passed through both the dry, technical phase and the overly humorous one that was designed to appeal to beginners.

"The assumption was everyone was scared to death of microtechnology, and you had to crack jokes," Mr. Esposito said. "We've largely gotten beyond that."

New American Library will aim 20 titles at the mass market by Jan. 1, 1983, and up to 40 sometime in 1984, he said. Orders "are exceeding sales projections — and that almost never happens," Mr. Esposito said.

New American Library's sales strategy includes compiling its own stable of authors, such as Mike Cane, whose "Computer Phone Book" being published this year will provide a guide of computer networks.

The publisher also is reaching agreement with the Waite Group of San Rafael, California, to market through bookstores more sophisticated books, mostly dealing with programming.

New American Library will market with dilithium Press of Beaverton, Oregon, 14 books designed largely for the novice to the mass audience in outlets from bookstores to supermarkets.

Mr. Meyer said the dilithium Press agreement pointed to a trend to less expensive books. At present, he said, novels — both paperback and hardback — average \$6.50 while computer books average \$17.

Satellite Telephone System: A Quantum Leap for India

By Kim Gordon-Bates

NEW DELHI — When India's first multinational satellite, INSAT-1B, begins to relay intercity phone calls from one end of the subcontinent to the other, telecommunications in India will have undergone a major revolution.

The Indian government has embarked on a major program to improve telecommunications, especially the telephone system. Telephone density is fewer than three instruments for every 1,000 inhabitants, one of the world's lowest. The system dates from 1948, when the British company Automatic Telephone & Equipment (ATE), a forerunner of the Plessey group, won a contract to introduce the new nation's first indigenous telephone network. ATE gave India the Strowger system, which relied purely on mechanical principles. The system, which is now outmoded, still constitutes the core of India's telephone operations. Later, in the 1960s, BTM, the Belgian affiliate of ITT, installed the Crossbar system.

All this, however, is being changed. Funds have been allocated to all the public-sector agencies dealing with telecommunications. The Department of Electronics, which acts as an advisory body to all the ministries seeking to acquire electronic know-how from abroad, has been issuing multimillion-dollar tenders to "ensure the development of a self-reliant telecommunications industry."

The Department of Posts and Telegraphs at the Ministry of Communications has been granted its largest budget ever, \$3 billion, to improve the country's basic telecommunications infrastructure for the current five-year plan, ending in 1985. Meanwhile, the country's main telephone equipment manufacturer,

Indian Telephone Industries, has seemingly unlimited access to public funds to attract "advanced proven technology" from the industrialized nations.

According to K.R. Nayar, director of the Telephone Research Center, the research and development arm of the Department of Posts and Telegraphs, "the main problem we have to overcome is the inadequate level of indigenous production."

India has been successfully manufacturing switching equipment of the Strowger and Crossbar types, coaxial and microwave transmission equipment, private automatic exchanges (PAX), electronic PAXs and electronic private automatic branch exchanges (EPABX). These are mostly produced by ITI's Palghat plant.

Established in 1976, Palghat quickly found itself in the paradoxical position of producing more exchanges than the country could absorb. To avoid a telephone exchange glut, the government was forced to liberalize its consumer purchasing procedures and allow direct consumer-producer outlets free of bureaucratic control.

ITI is about to sign a major contract with CIT-Alcatel, the French telecommunications multinational, in a deal that involves a \$35-million investment for the manufacture of digital trunk automatic exchanges (DTAX), at a rate of 150,000 lines a year.

Part of the challenge so far has been to bridge the technology gap between the Strowger system and the more technologically advanced systems. Unfortunately, this has not been easy. Policy decisions have frequently been plagued by intergovernmental rivalry.

(Continued on Page 16)

Across Asia, Communications Have Highs, Lows

By Dinah Lee

HONG KONG — Recently a Hong Kong customer complained to the local telephone company that despite much regular publicity given to the expansion of direct dialing services, he was still unable to dial directly to his home in India. "We had to diplomatically explain that it wasn't Hong Kong's fault," a Hong Kong telephone company executive said. "India just doesn't have the equipment."

The customer's dilemma points up the enormous gap in communication technology existing throughout a region well known to have unrivaled growth potential. Computers and telecommunications are among Asia's fastest growing industries. Hong Kong, with its well-developed international financial community, is on a par with London and New York in replacing the telephone and telex with high-speed data transmission systems.

They offer contact with overseas offices at less cost than telephone or telex while using the same telephone, telex and satellite channels.

But while Hong Kong is moving toward data transmission at the speed of light, long-distance callers in neighboring Malaysia, Indonesia or the Philippines are still kept waiting for hours.

It shouldn't seem strange, however, that some of the most modern systems are in increasing use in Asia, where developing countries can buy the latest and best equipment available. According to the assistant general manager, finance, of the Hongkong Telephone Company, Brian Kennedy, Hong Kong had until recently the world's largest urban optical fiber network, through which data can be transmitted by phone. The network extends 3,000 fiber-kilometers and has 13 exchanges. This distinction was crossed with the recent purchase

of a larger system by Buenos Aires. "In two or three years' time our fiber optics network will be the equivalent of telephone lines," Mr. Kennedy said.

By 1982, the telephone network here covered nearly 2 million telephones, of which nearly a quarter were business lines, in a territory with more than 5.5 million people. In 1982, Hong Kong used 85.2 million minutes of telex time. Mr. Kennedy said he expected growth in demand for data transmission to be 10 percent to 15 percent a year.

It was not so long ago that most hotels, shops and even sidewalk fast-food counters had a telephone sitting on a shelf for the free use of any passer-by. Although this is still common, pay phones are increasingly becoming the order of the day. Subscribers to international direct dialing number 100,000, with the service reaching 100 countries — if not yet India, everywhere

from Abu Dhabi to Macao. The fastest-growing route is to China. After much negotiation, direct dialing to Guangdong, China's southernmost province, was started this year, and other Chinese provincial capitals are expected to follow.

But the real competition and excitement is at the upper end of the market where the Hongkong Telephone Company and its rival, Cable and Wireless (HK) Ltd., which runs the city's telex and telegram services, are fighting to persuade the business community of the relative merits of their data transmission services.

In 1981, the Telephone Company jointly developed with Argon, in Tel Aviv, the software for the Datal Message Services, which began operation in December, 1982, after a year's delay caused in part by objections from Cable and Wireless. The message service offers data transmission to London,

New York, Los Angeles, Tel Aviv and South Africa, with the use of a telephone, a "modem" (a box modifying the telephone to a word processor), and the Telephone Company's main computer.

With a "packet switching service," this system speeds already prepared data messages from the large computer of a telephone or telex company to a corresponding computer at the destination and then passes the message to the subscriber. "People aren't concerned about the cost initially," Mr. Kennedy said, "but once they've got the system they look for ways to reduce costs."

Using the telephone system and almost any variety of microprocessor, a subscriber to Datal Message Services pays rates that are 20 percent to 25 percent cheaper than telex to the United States and Britain. For secretaries at a desk, the main attraction is that a word processor can be used for preparing messages rather than a special telex machine.

The Hongkong Telephone Company said that precisely because its service requires no separate "dedicated network of lines" but uses simply the ordinary telephone system, it threatens the telex market. In Japan, both Kokusai Denshin Denway and Nippon Telephone and Telegraph are, not surprisingly, very protective of their respective monopolies. The message service in Hong Kong is available to "pirates" in Taiwan who subscribe and receive their messages in Hong Kong's computer and can call in from Taiwan. According to one local report, Hongkong Telephone has said that it hopes to take 40 percent of the outward international telex business from Hong Kong in the next few years. Literally only a block away, Cable and Wireless has its own new system called Dialcom, which began operation in September.

This system is operated by the Hong Kong company under license to Dialcom in the United States and is similar to British Telecom's Gold system and Australia's Mercury. Jim Carman, Asia-Pacific sales manager for Cable and Wireless, said that a system using telephone lines was vulnerable to the corruptions caused by bad lines, while Dialcom eliminates dependence on local telephone exchanges altogether. Unlike Datal Message Services, which is a "store and forward" system, Dialcom is called a "store and receive" system, also known as "electronic mail."

"Electronic mailboxes" are private — only a password can open and retrieve information.

Although the telex system is not connected to the Dialcom system, the telex machine can be adapted to talk to Dialcom.

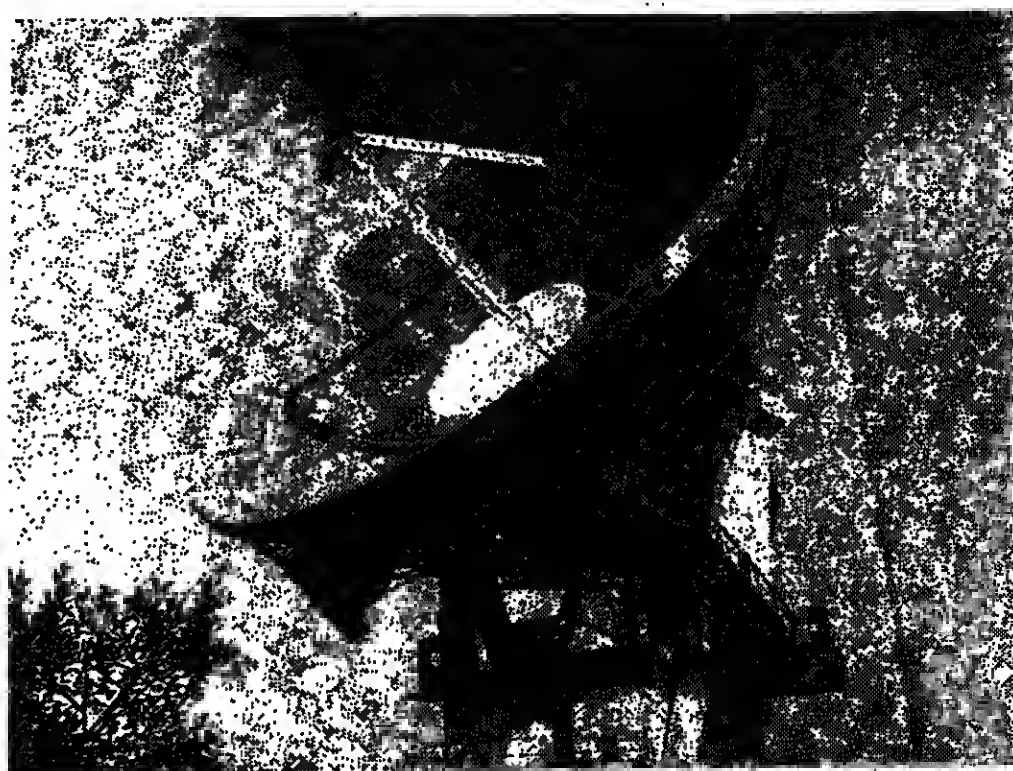
The registration fee of 600 Hong Kong dollars puts the system in the range of the smaller business user who then pays 80 Hong Kong cents per minute of Dialcom transmission time.

According to Michael Lee, customer support manager, there are already 3,000 to 4,000 customers in the United Kingdom and 42,000 in North America.

He said that in a city like Hong Kong, where a large number of companies already have their own hardware, Dialcom uses a "mailbox," which the companies then can call from any terminal at home or in the office.

None of the big telecommunications companies has pushed its program to transmit ideographs as fast as one might think in a region where Cantonese and Mandarin Chinese and Japanese are dominant languages.

Because of the complexities of transmitting Asian languages with a keyboard, the Japanese market for facsimile transmission has grown faster than any other side of the new industry there, even though facsimile messages cannot be edited or "packaged" at high speed.



Satellite transmission and reception systems will upgrade India's telephone system.

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COMMUNICATIONS TECHNOLOGY

Nigerian Expansion Of Telecommunications Vital to Development

By Patrick Smith

LAGOS — Nigeria is the most populous and the richest country in black Africa, but its economic development is seriously hampered by inadequate telecommunications.

More than 180,000 telephone lines and 12,000 telex lines are due to be in service by the end of this year. Nigeria's economic planners estimate that before 1985 the country will have 2.5 telephone lines per thousand inhabitants.

The Ivory Coast and Zimbabwe have more than one telephone line per hundred inhabitants. Nigerian officials at the government-owned Post and Telecommunications Department said that unlike these countries whose telecommunications have to service one major city and two or three other urban centers, Nigeria has a population of more than 80 million people with the present capital at Lagos, the new federal capital being built at Abuja and 19 state capitals. In addition there are more than 800 urban centers.

Africa has one percent of the world's telephone population. But, telecommunications is no longer seen as a luxury in Africa; it is seen as an instrument of development. Experience has shown that telecommunications can help basic resources such as transport, roads and water to be used more efficiently. As transport costs have shot up, governments have looked for savings in the telecommunications sector where developments such as digital switching and satellites have actually brought costs down in the long term.

One major problem has been the multiplicity of contractors operating in the country. A spokesman for the telecommunications department said 28 different telecommunications contractors are operating in Nigeria, but the government plans to cut this down to about six or seven companies in an attempt to standardize equipment used in the country. ITT Nigeria, the biggest telecommunications company in the country, is building a factory to produce a wide range of telecommunications equipment.

Officials at the Post and Telecommunications Department said that past efforts to improve the telecommunications network put too much investment in telephone switching equipment and exchanges and not enough in the external line plants and transmission (trunk) line facilities. To rectify this, they contracted GEC to refurbish all the existing transmission lines in collaboration with department staff.

The present government announced plans to install a new transmission system, including a coaxial cable system between Lagos and Kaduna — a distance of more than 800 kilometers (about 500 miles). This transmission line needs 200 repeater stations, some of which are located in the bush with no readily available source of power.

The repeater stations rely on mini-generating stations to power them. It is usually the breakdown of one or more of these generators that causes breaks in transmission.

The Ministry of Communications estimates that the new national transmission system with its 500 repeater stations will cost more than \$150 million in fuel, spare parts and maintenance costs. To save money the ministry is investigating the use of solar power for the remaining parts of the transmission project.

Nigeria's domestic satellite built in 1977 provides for a network radio and television service and a national telegram service.

Government studies indicate there is sufficient demand from government agencies like the central banks, customs, security agencies, and the commercial banking and media industries and from adjacent African countries to embark on an additional domestic satellite project.

Despite the continuing problems of city-to-city transmission there has been a significant improvement in the telephone system within cities. This has been achieved by a massive program for the construction of telephone exchanges; in the last four years, 50 exchanges of varying sizes have been constructed.

Work is in progress on 30 more. These will be supplemented by more than 35 mobile exchange facilities.

The bulk of this work has been undertaken by ITT Nigeria, which acts as agent for ITT Corp. One of the biggest exchanges the company has constructed recently is at Ibadan.

It has a modern public switching network with an initial capacity of 10,000 lines and a capacity for up to 30,000 lines. The exchange cost more than \$60 million to build.

Other companies like Eltec (Nigeria), formerly Siemens (Nigeria) and Fujikura have worked on the major telephone exchange projects. And as part of government policy to use made-in-Nigeria products first, Eltec set up a cable manufacturing company following the commercial success of the German-Nigerian partnership company, Kabelmetal.

The most tangible improvement in the Nigerian telecommunications system has been the improvement in links with the international telecommunications system.

Four years ago all international calls had to go through the operator and some had to be booked.

Since then there has been a 400-percent increase in international calls made from Nigeria but more than 5,000 subscribers have direct dialing facilities to the rest of Africa, Europe and the United States.

The chairman of Nigerian External Communications, Ibrahim Tahir, said the telephone company's turnover increased from \$74 million in 1980 to \$126 million in 1981 — while profits soared from \$7 million to \$44 million.

He said the company, conservatively estimated to be worth more than \$460 million, is now looking forward to a turnover of about \$650 million by 1985-86.

It operates an earth station at Lanlate in the south, built in 1972, and in Kufajana in the north, completed this year.

Construction of a third station in the east of the country began at Enugu earlier this year. A fourth will be built at Abuja.

Busy U.S. Magazine Industry Backs Growing Need for Information

By Skip Wollenberg

The Associated Press

NEW YORK — When David Ahl began publishing a magazine to help people make better use of schoolroom computers nine years ago, he had the field largely to himself. Today, his magazine, Creative Computing, competes with more than 130 personal-computer publications, and new ones are born every week.

The rush to market in the United States is so frantic that in late July two publications with the same name — PC Week — appeared on the newsstands the same day. The conflict was resolved with computer-quick precision: One publisher agreed to buy out the other and hired the competitor's staff.

Mr. Ahl said that despite the proliferation of computer publications aimed at users of home and small business computers, he finds little has changed about why people buy them. "Someone new to the field still has the same need for basic information. They have to learn the rudiments of logically analyzing a problem. They have to know about the various components of a computer," he said.

One industry watcher, International Data Corp.

of Framingham, Massachusetts, estimates the number of computers in homes in the United States soared from 216,000 in 1980 to 2.3 million by 1982 and probably will more than double to 5.88 million this year. That has triggered a flood of magazines with names such as Interface Age, InfoWorld, ComputerWeek and Digit. Some cover the industry in general. Others concentrate on specific products. Some aim for the beginner and others for the computer veteran.

Among the generalists are Byte, Computer, Microcomputing, Personal Computing and Popular Computing. The more specific magazines include Sync, which deals with Times-Sinclair computers, and PC, PC World and Personal Computer Age, which cover IBM's Personal Computer. The Apple computer has inspired some of the more colorful magazine names — InCider, Nibble, Peelings II and Apple Orchard.

Still other magazines, such as Softside and Softline, focus on the programs that make computers work — the software. The magazines are rooted in newsletters that sprang up after the introduction of minicomputers in the mid-1960s and microcomputers in the mid-1970s.

The newsletters frequently were geared to educators and were published by the computer makers

themselves or by professional organizations. Mr. Ahl, who once worked in marketing for a computer company, began Creative Computing in 1974 as a hobby from the basement of his house in New Jersey. With mailing lists from two computer manufacturers and \$600, he prepared and distributed about 8,000 copies of the first issue.

Circulation had grown to about 120,000 when the magazine was bought by Ziff-Davis Publishing Co. in 1981. Its circulation now is more than 250,000. The development of the microcomputer industry not only spawned a generation of computer magazines, but also helped change one long-running publication's name.

Popular Electronics, which had attracted a loyal following among hobbyists in 20 years of publication, was renamed Computers & Electronics in late 1982. Its publisher, William David, said circulation — steady at 400,000 for several years — had increased to 575,000 since the title change.

The personal-computer magazines are heavy with ads, mostly from computer and computer software companies. A few of them, such as Byte and PC, resemble telephone books at 600 pages and more. The magazines generally contain stories describing new products and their uses. They compare the performance of different machines and

software, answer questions from readers and provide programs that can be typed into a computer system. But each tries to be different. Mr. Ahl said his Creative Computing specializes in "in-depth evaluations" of equipment and software.

Computer, which operates within the publishing division of American Broadcasting Co., gives the home-computer buff programs that can be used on a variety of machines, said Gary Ingersoll, its president.

Personal Computing, published by Hayden Publishing Co. Inc., is written to answer the question: "What else can I do with my machine?" according to the magazine.

Byte, published by McGraw-Hill Publications Co., is aimed at sophisticated computer users, some of whom may have advanced degrees, said the publisher, Gene Simpson.

But publishing analysts said the number of computer magazines eventually will dwindle, probably in step with the widely expected shakeout in the industry that spawned them. "Every boom creates opportunities," said Ed Atorino, who follows the publishing industry for the investment firm of Smith Barney, Harris, Upham & Co. "Inevitably, there will be a shakeout as the ad dollars get spread pretty thin. How long until then, nobody can predict."

Six-Year Saudi Arabian Investment Program Is Beginning to Pay Off

By Robert Bailey

LONDON — The telecommunications system in Saudi Arabia is not yet on a par with North American systems or the best in Europe. But after six years of investment at levels that few developing nations could even consider, the kingdom is catching up fast.

Calls can now be dialed direct to about 80 countries. A one-minute call from Jeddah to Washington — which could not even have been attempted a few years ago with any certainty of getting through — is now made routinely, and at a cost of about \$2.60.

Almost unlimited funds have permitted the kingdom to install the latest in microwave, satellite and coaxial-cable technology. These links provide increasingly high standards of national and international communications for city and rural dwellers in the kingdom's vast deserts and often hostile environment.

While the cost and effort have been prodigious — Saudi Arabia has spent \$5.2 billion since it signed the Telephone Expansion Project contract in 1977 — the investment is proving to be one of the kingdom's best. The number of working telephones has increased from 160,000 to 800,000 in five years.

By relying primarily on computer-controlled digital technology rather than the conventional analog systems, the Saudis have obtained a vast increase in switching capacity, and a system that is compact and reliable — important traits in a developing country short on skilled manpower.

This ongoing investment has done much to improve the kingdom's infrastructure, adding to the rapid growth of commerce and industry. And there is to be no lull in spending, despite declining oil revenues. The national budget allocates \$1.84 billion to be spent on telecommunications capital projects in the current financial year. And the armed forces are to spend

There is to be no lull in spending, despite declining oil revenues. The national budget allocates \$1.84 billion to be spent on telecommunications capital projects in the current financial year. And the armed forces are to spend almost as much to improve their own communications facilities.

almost as much to improve their own communications facilities.

The National Guard, for example, will have a nationwide microwave communications system under a \$700-million contract being coordinated by Cable & Wireless of Britain.

Along with its major push to develop internal communications, Saudi Arabia has joined with its Arab neighbors in an effort to develop regional satellite communications.

The kingdom is the majority partner in the project by Arab Satellite Communications Organization, or ArabSat, to provide telecommunications services among Arab League countries, using two satellites being built by Ford Aerospace & Communications and Aerospatiale of France.

The satellites are scheduled to be launched in the second half of 1984 by the European Space Agency's Ariane-3 rocket and the National Aeronautics and Space Administration's space shuttle. The ArabSat system represents the Arab world's most ambitious attempt at technical cooperation. It will provide tele-

phone and data transmission services and a television channel that, for the first time, will offer educational television programs throughout the region.

Ground receiving stations are now being constructed. The main tracking and control station is being built in Riyadh by Nippon Electric Co. Saudi Arabia is also likely to play a leading role in a proposed Islamic Telecommunication Union.

But the kingdom's greatest emphasis is on its own development plans. These call for an increase in installed switching capacity from the present 1.1 million lines to 2.25 million lines by 1990. Most of the work is expected to go to the original consortium of Philips of the Netherlands and L.M. Ericsson of Sweden. The two companies have installed more than 200 analog and digital exchanges, with connections to operational centers in Riyadh, Jeddah, Dammam and Taif. The computerized control center is based in Riyadh.

Italy's Sirti, through a local company called Saudi Arabian Telecommunications Co., known as Sartelec, has supplied the key coaxial cable transmission element in the Saudi network. The cable stretches across

the kingdom, from Dammam to Taif. In September, Sartelec signed a contract worth \$290 million to install an additional 2,500-kilometer (1,550-mile) cable link from Riyadh to Tabuk via Jeddah.

Microwave is the other principal transmission method. Western Electric of the United States in 1979 provided the initial 10,000-kilometer microwave network, involving 300 towers. In August 1982, American Telephone & Telegraph Co., the parent company of Western Electric, was awarded a \$378-million contract to expand the microwave system by almost doubling the number of voice circuits, now at 70,000. The enhanced system is designed to provide direct dialing to remote areas, including the Sharoura military center in the Rub al-Khali desert.

The civil network will become more sophisticated with the completion by Philips and Ericsson of a national automatic telephone system. The work, due to be completed in 1985, involves the provision of 18,000 mobile telephones and 48 base stations, to serve 32 cities and towns as well as the Jeddah-Medina and Jeddah-Mecca road networks. The operation uses the Nordic Mobile Telephone system, which allows subscribers to make domestic and international calls from their cars.

Bell Canada Enterprises has managed the Philips-Ericsson system since 1977. This year it extended its arrangement with the Saudis for five years in a contract worth \$1.3 billion.

Eventually the Saudis are expected to assume the operation and management of their system, and probably will turn it over to the private sector. Alawi Darwish Kayyal, the minister of posts, telegraphs and telephones, reportedly plans to transform Saudi Telephone into an independently registered corporation by 1985.

Rules of Global Communications Change, Leaving Legal Uncertainties

(Continued From Page 10)

the use of non-Intelsat satellite facilities for international "public telecommunications service" without prior coordination with Intelsat to ensure the technical compatibility of such facilities with the Intelsat space segment, and it states that such use of alternative facilities will not cause "economic harm" to the Intelsat system. To date, Intelsat has concurred in the use of privately owned domestic U.S. satellites to provide television service from the United States to such neighboring countries as Canada, Bermuda and various Caribbean and Central American countries.

Since the resource of outer space is irreplaceable for efficient low-cost communication, it is only a matter of time before dispute settlement techniques and procedures will be extensively relied upon to resolve conflicts. This will be true even with the existence of extensive satellite insurance, where the issue will be the interpretation of the policy language in the context of the state of the technology.

Extensive treaty law may be developed. The General Assembly of the United Nations recently adopted a resolution prohibiting transborder direct broadcast satellite transmissions to the households of a receiving country without the government's prior consent. The resolution, which was backed by the Soviet Union and Third World countries, represents a substantial restriction on international television programming and could have particular impact on the emergence of DBS as an applied technology in Europe, given the likelihood of "spillover" of transmissions in Soviet-bloc states.

The action of the General Assembly will serve to reinforce for the United States and other technologically advanced countries what they perceive as a politicizing of the proceedings of the International Telecommunications Union (ITU).

The specialized UN agency responsible for managing the international allocation among and use by nations of the radio spectrum, including via satellite. The ITU's jurisdiction to ensure harmonious use of the geosynchronous orbit by member states through a highly refined coordination process could be threatened as a result of such political undercurrents. An interesting example of this was recently witnessed in Cuba's filing with the ITU of notice that it would seek to use a position in the orbital arc technically unacceptable close to several U.S. satellites. As more

countries strive to launch and operate satellites of their own for nationalistic reasons, the tensions thus experienced could be exacerbated.

Another major legal constraint on program content of television transmitted by satellite will be the application of international and domestic copyright laws. In the United States, the Copyright Royalty Tribunal has adopted special rules protecting the owners of domestic television programming received via "distant signals," usually by satellite. The perturbations in domestic copyright law reflected in the U.S. experience will take on new dimensions on the international plateau as television signals are transmitted not only between countries but among continents, and issues of jurisdiction of national copyright rules and adequacy of

international conventions are bound to be presented.

National telecommunications laws can also be expected to shape the way in which investments in international satellite systems are structured. Under U.S. law, for instance, severe restrictions are imposed on equity involvement by foreign interests in the licenses of satellite systems. However, foreign concerns may freely lease or even purchase transponders on satellites providing service in the United States.

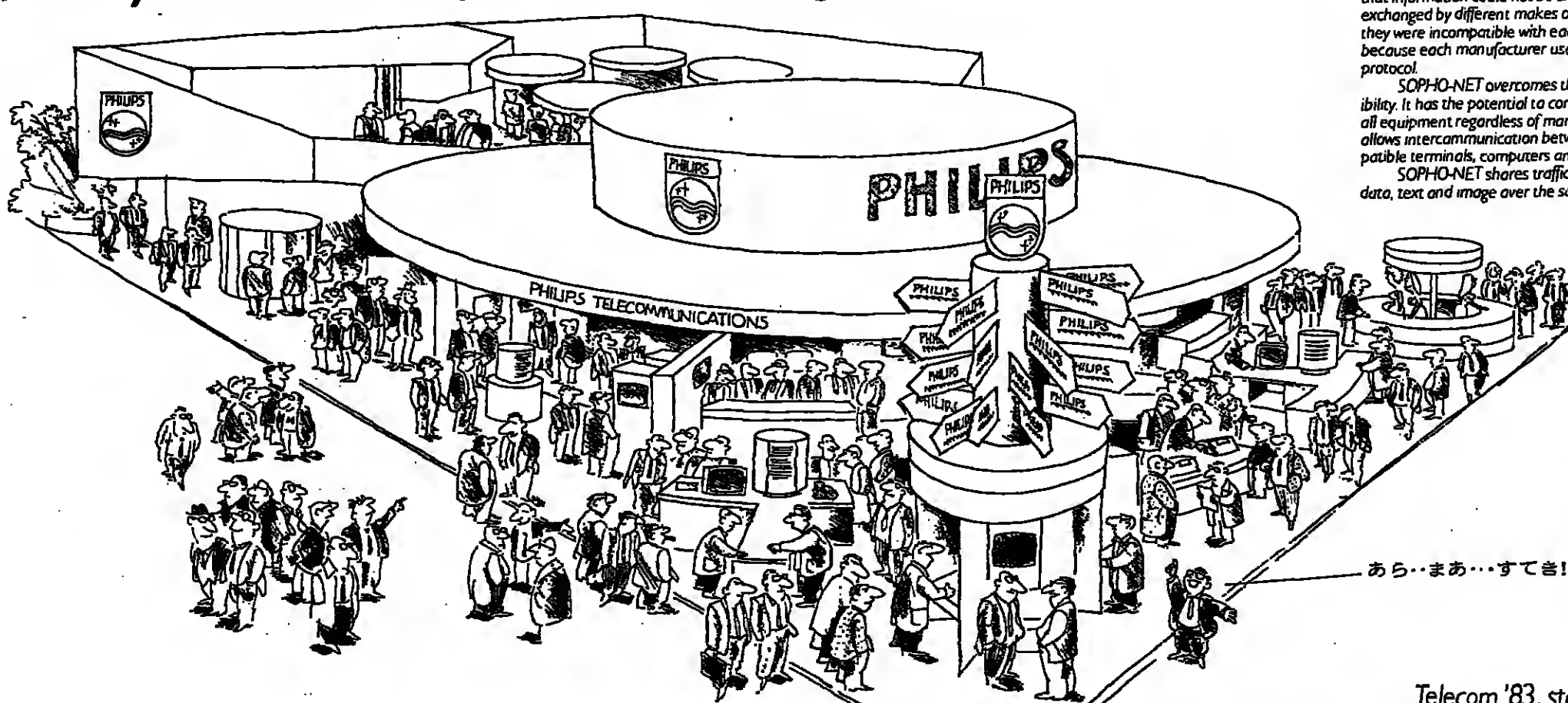
The advent of space stations, or large space structures, will also continue to change the rules of the game. Because of the high-power transponders on space platforms, beam shaping will be possible and platform-to-platform communication easily accomplished. However, the high cost of the platforms will

result in sophisticated joint ventures and multinational cooperative endeavors that will require new and innovative legal regimes.

The right to communicate is a basic right whether it is implemented by governments or private ventures. The rules need to be clear and, if at all possible, developed in an anticipatory fashion. This is the more difficult approach to the law. But then the game itself is for very high stakes.

If international telecommunications law can be adapted to facilitate platforms and dispute settlement techniques can be developed that are timely and equitable, then the new rules of the game will facilitate and support the technological imperative. If not, then the game will most likely take on a distinctly militaristic format — and then nobody wins.

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COMMUNICATIONS TECHNOLOGY

Digital Advances Bring 'Home Communications Hub' Closer

By Pearl Marshall

BONN — The start of production of digital television sets last month was viewed by many as the first significant advance in television since the introduction of color.

Standard Elektrik Lorenz (SEL), the West German subsidiary of ITT Corp., is the first manufacturer to bring such sets to the world's stores. By incorporating computer technology, the sets are able to convert today's incoming analog signals to digital data. This results in enhanced sound and picture quality. The only digital circuits in television until now were limited to control functions.

Within the next two to three years, viewers will be able to use digital sets to freeze a spectacular soccer goal kick or zoom in for a close-up.

As television becomes more like a computer, the long talked about "home communications hub" appears to be easily achievable by the end of the decade. Sets will not just entertain, but will provide outside communications for information retrieval, banking and shopping. Personal messages will be able to be sent to friends.

Some jobs currently done in the office will be carried out at home with the digital set, bringing pro-

found changes to family and city life. The potential changes already are being seriously examined by social scientists.

However, although digital TV brings such advances tantalizingly close, much development work still has to be done. Entry of the SEL sets into West German stores — and shortly those in Switzerland and Austria too — is viewed as only the first in a series of exciting breakthroughs over the next few years.

Such sets also simplify the removal of international broadcasting barriers caused by current in-

compatible TV standards because they can be manufactured to process signals in any broadcasting format. It is just a matter of which chip is put in the set.

SEL modeled a set capable of using France's SECAM system at an audio and video fair in West Berlin in September. East Berlin also uses the same transmission system.

SEL claims its ability to digitize almost all signal processing chores provides not only a crisper picture and better sound, but also increased reliability. This is because there are fewer components follow-

ing the replacement of about 300 conventional components with just seven chips and because the digital data constantly corrects performance deviations due to the aging of other components.

But are these advantages enough to attract viewers to the higher end of the TV market and will they pay \$1,000 for the SEL model? A SEL spokesman, Hans Engelkamp, who pointed out that the advantages are coupled with additional selling points, including a teletext decoder, said that he was positive about the market. The decoder processes additional information sent out by television stations in page format such as news, weather, sports and theater and opera programs.

West German viewers, too, are already oriented toward purchase of higher-priced sets because of their desire to receive stereo sound transmissions such as those put out in the last two years by the country's second TV system, Zweites Deutsches Fernsehen. The two sound channels often enable set owners to choose from one of two languages when viewing certain films. All SEL's new digital sets include such stereo sound reception.

SEL plans to use its position over the next few months as sole supplier of digital television sets to increase its share — currently 10 percent or more — of the West German market.

Its initial advantage has been ensured by its access to an ITT subsidiary to ITT's chip sets way ahead of other European and Japanese manufacturers. "We should have a time advantage of at least half a year," said Ludwig Orth, vice president of ITT Europe and SEL's general manager of consumer products. "If you look at our competitors — and last month in Berlin was a good place to do so — Grundig was announcing it might start in the second quarter of 1984. Telefunken was still considering [the question], but I think they will not start much earlier than the second or third quarter of next year."

These and other competitors will also be purchasing the ITT chip sets. ITT's effort to gain a lead in these sets is seen by others in the industry as an attempt to corner the market. A large demand for such chip sets would bring costs down, making digital television more competitive in terms of price. By the mid-1980s, ITT expects to reduce the number of chips in its set from seven to four, cutting costs further.

Competitive chip sets are being developed by other firms such as Philips, a leading European producer of signal-processing components, but Philips will not be marketing "early digitized" TV until around 1985, said Jan Geel, a spokesman for Philips in Eindhoven, the Netherlands.

The Philips sets will include additional features not found in the current SEL sets, including flicker-free pictures and the ability to freeze action and zoom in for close-ups.

Philips questions whether the digital sets entering the market offer any obviously discernible improvements in image quality over conventional analog sets. SEL's Mr. Orth said it was a matter of individual taste, adding that "we are at the starting point of a new technology and the clear, visible improvements are to come."

The next big jump — to the flicker-free picture and the zoom and freezing actions — can only come when each picture flashed on the tube can first be stored in a memory. Both ITT and Philips are neck and neck in the race to see who can develop the technology from laboratory to commercial stage first. Both are aiming to have such sets on the market around the same time.

Two other developments that digital technology will bring shortly are the eradication of "ghosts," the double images that plague reception in built-up areas, and the elimination of "snow" or so-called noise. Ghosts occur when transmissions are partly reflected off large buildings and mountains, causing the antenna to receive the signal twice. Future digital circuitry will be able to detect such ghosts and prevent them from appearing on the screen.

Banking, TV-order shopping and large-scale information retrieval will become an option for West German television viewers as the country's national post and telecommunications organization, Deutsche Bundespost, expands its videotex service known as Bildschirmtext. Last month, it officially announced its plans to go nationwide with videotex in May next year after three years of field tests in West Berlin and Düsseldorf. By 1986 it hopes to have 1 million users and 70,000 information providers, among them the organizations and businesses such as banks, travel agents and mail-order firms who want to reach the television public.

Bildschirmtext is made possible by connecting the television set via the normal telephone network to a computer. May marks the occasion of the Deutsche Bundespost's start-up of its enormous central IBM computer at Ulm.

Besides a telephone and TV set to receive Bildschirmtext, the user needs a decoder and a modem, a device rented from the Deutsche Bundespost, which translates the computer data so that it can be picked up by the television.

As Bildschirmtext technology conforms to European videotex standards, West German users will shortly be able to use television to communicate and purchase goods across international borders.



The Airplay tray video games fit onto passengers' dinner trays.

A Canadian Airline Hoping To Introduce Video Games

By Fred Langan

TORONTO — After a successful summer trial, the Canadian airline CP Air is negotiating to add video games to its permanent list of in-flight entertainment.

The decision by CP Air, a division of Canadian Pacific Limited, grew out of an experiment during the summer in which video games were built into trays on top of regular meal trays. The games, including black jack, baseball, boxing and tennis, were rented to passengers for \$3.50.

The machines, more like handheld video games than the more sophisticated ones in arcades, offered two or three separate games for the experiment.

The inventors and the airlines plan to build more complex versions.

CP Air tested the games on one of its longest flights, the nine-hour Vancouver-to-Amsterdam flight, as well as on its Vancouver-to-Toronto flight.

Passengers could also pay \$3.50 for earphones for music and movies, but video games were available to passengers who were sitting in the economy section of the plane.

The games emit a slight beep similar to a pocket calculator.

A survey of passengers who used the games showed that 95 percent would rent them again.

CP Air's manager of in-flight product development, Don Buchanan, said it was almost certain the airline would go ahead with the idea, pending an agreement with suppliers.

"We're looking at a no-risk situation for the airline," he said. "They can use our audience in exchange for the machines."

The idea for the game came at about 30,000 feet, to a passenger, Michael Thorek, who said he was

fidgeting with the tray in front of him.

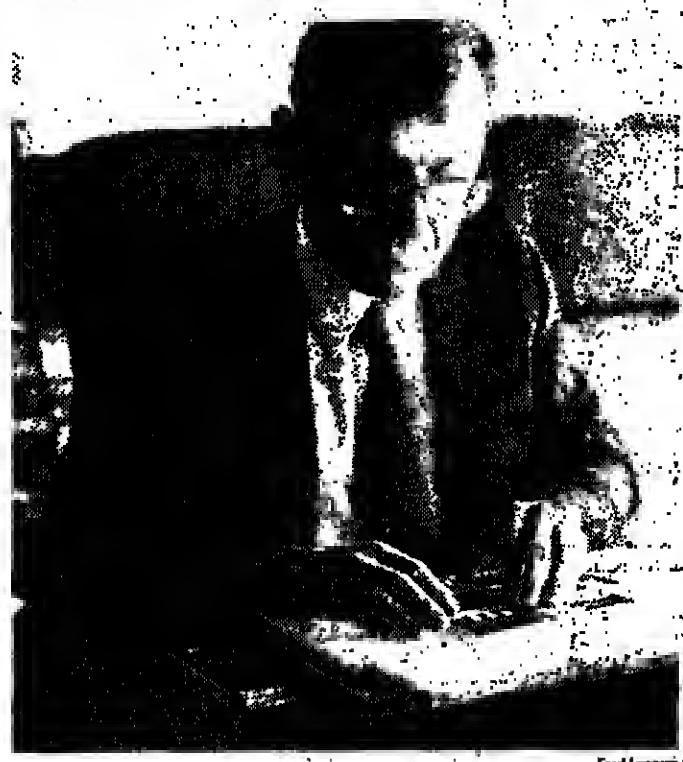
"Some of my best ideas come on airplanes," said Mr. Thorek, the inventor of one of the two systems used by CP Air. Mr. Thorek, head of an executive search firm in Toronto, started Air Video Inc. as a result of this idea. "It dawned on me that the tray was only used for meals and the rest of the time it was empty. I guess because I was pushing on the tray I wanted some response. Then I thought there should be a video screen so I could get some responses from it."

Another firm, Albus of San Jose,

California, also made games for the CP Air test.

The difference between the experimental machines and an acceptable final product would be about \$450,000 to \$500,000 in development," Mr. Thorek said. CP Air would like the more advanced versions to provide flight and safety information and a small computer as well as games.

Mr. Thorek said his share of profits would come not from outright sales of the games but from a revenue-sharing agreement. "The airline supplies the space, I supply the games and we share the revenue," he said.



Michael Thorek: An inventive passenger.

Turning to Needs of Homes

(Continued From Page 12)

While futurists do not see eye to eye on the implications of these impending changes, few believe that the arrival of the electronic home will have a negative social impact.

"It will be an evolutionary process that should not cause major

dislocations," assured Mr. Compaine said.

"My whole thesis is that the home of the future will become more like the home of the past," Mr. Mason said. He believes that the computer-controlled electronic center of the home will serve as a new "hearth."

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Uncertainties Cloud Broadcasting Plans

(Continued From Page 11)

meter across mounted in a garden or on the roof of a home. At the moment most of Europe uses the PAL color system, but France and the Eastern bloc use SECAM. Electronically there is room in each satellite channel for higher quality pictures than are possible from PAL or SECAM.

The British government has backed the Multiplexed Analogue Components system, known as MAC and developed by engineers of the Independent Broadcasting Authority, which controls commercial TV in Britain. MAC is a completely new system which, if adopted across Europe, would provide

the first single TV system in Europe. One set would work in any country. As a bonus European viewers could get better pictures. Although engineers across Europe favor MAC, governments, notably the French and German governments, have not followed Britain.

The British Broadcasting System, which is committed to start DBS broadcasting in 1986, may have to defy the British government and use PAL or risk technical isolation from the rest of Europe. To confuse things, the Independent Broadcasting Authority has been given permission to start broadcasting commercial DBS on two more of the five channels allocated

to Britain. France probably will start transmitting in SECAM and Germany in PAL, perhaps later switching to MAC if Britain takes the risk and pioneers the new system.

To confuse the issue further, some people argue that there is no need to use 200-watt transmitters for DBS. They say that improved receiver technology makes it possible to pick up signals from a lower-powered, and thus cheaper, satellite. But this could mean that viewers get poor quality pictures or have to spend more money on their receivers. Poor quality pictures from satellites may be acceptable in North America, where the idea of

low-power DBS originated and where terrestrial TV is traditionally of poorer quality. But in Europe viewers are used to crisp, clear color. Also low-power satellite signals will be more prone to interference, such as "scatter" by rain, resulting in more days when reception is below average. It would be better, say broadcast engineers, to take advantage of improving receiver technology by reducing the size of the dish aerial needed, for instance to 6 meters from 9 meters.

DBS is closely tied to cable TV. This is already used in many countries where wires feed signals into homes that cannot get good reception from their roof aerials.

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Through AMPLICA, we produce low-noise and medium-power solid-state microwave amplifiers and related systems. On display will be some of our 4 and 12 gigahertz satellite reception equipment and amplifiers.

And INTELNET, the joint venture between Inter-Continental Hotels and COMSAT, will discuss its worldwide videoconferencing network with initial service between New York and London.

For more information stop by our Booth 1.134 or contact COMSAT, Marketing Division, 350 L'Enfant Plaza, S.W., Washington, D.C. 20024, USA. Phone 202/863-7373.

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WEDNESDAY, OCTOBER 26, 1983

BUSINESS PEOPLE

B.S. Thomas to Be Executive Director of Merchant Banker Samuel Montagu

Barbara S. Thomas is to leave the U.S. Securities and Exchange Commission after serving three years of her five-year term, giving the five-member SEC further toward its own thinking.

Mrs. Thomas, the second woman to serve on the SEC and the youngest commissioner in its history, is to become the first woman executive director of the London-based merchant bank, Samuel Montagu & Co. Ltd.

Mrs. Thomas, a Democrat, was appointed to the SEC by President Jimmy Carter at the age of 33 after a meteoric career that led to a partnership in the New York law firm of Kaye, Scholer, Fierman, Hays & Handler.

"When I came to the commission, I was the most conservative person on the SEC," she said recently. "But the commission has moved so much toward the right that I am now precisely in the center."

Her expertise and outspoken views on securities and international capital markets have won her a considerable reputation outside the United States. When she joins Samuel Montagu in January, she is to divide her time between offices in New York and Hong Kong, where she is expected to have a galvanizing effect on the merchant bank's Far Eastern operations. She is energetically bullish about the future of Southeast Asia in general and Hong Kong in particular and has enthusiastically supported her husband's move to open an office of his New York-based law firm, Paul, Weiss, Rikkind, Wharton & Garrison, in the colony.

Mrs. Thomas, who was visiting London this week to speak at a conference on self-regulation in the securities industry, said she was "absolutely thrilled" at the challenge presented by her new job.

"To think that such an old-established London company should have someone who is American, a woman and my age as a director is very exciting," she said, after her election to the Samuel Montagu board Monday.

"But I feel I must stay on at the SEC until the crucial vote on self registration in November. I feel it is a very bad system, as applied to equities, and I must be there to try to force a compromise."

Lennings Seen Resigning From GHH

Manfred Lennings, chairman of the executive board of West Germany's Gutehoffnungshütte engineering group, is expected to resign early next month, following clashes over his rescue plans for GHH's main subsidiary, Maschinenfabrik Augsburg-Nürnberg, maker of MAN trucks and diesel engines. Mr. Lennings is also chairman of the supervisory board of MAN, which had a loss of 300 million Deutsche marks (\$116 million) last year on sales of 8.8 billion DM.

A GHH spokesman said this week that the group could make no official statement, as "no one can predict what may happen" between now and the extraordinary general meeting that has been called for Nov. 8.

But company officials have indicated that Mr. Lennings will probably be succeeded by Klaus Goette, formerly of Allianz Versicherung, the insurance giant now stalking Britain's Eagle Star Co. and the Fick industrial group. Mr. Goette is a member of MAN's supervisory board.

Other Appointments

A senior advertising man from the London office of J. Walter Thompson, John Scott, has been appointed director of marketing, Europe, for Burger King.

Mr. Scott, who was a senior associate director of JWT, joins Bill Prasher, Burger King's recently appointed senior vice president and general manager, Europe, as the world's second-largest hamburger chain launches a renewed assault on the European market, backed by a \$20-million cash injection.

At present, Burger King has 69 outlets in Europe, out of a worldwide total of 3,500. The company's target for Europe is 350 by 1987, with 50 in Britain.

Anthony Macaulay, a partner in the law firm of Herbert Smith & Co., is to be the new secretary of London's panel on takeovers and mergers.

Graham Pinnett, secretary for the past two years, will return to his firm, Lovell White & King, Nov. 7.

Svenska International, the London-based subsidiary of Svenska Handelsbanken, one of Sweden's largest banks, is now licensed to take deposits and has named Lars Brander as managing director. Other Svenska appointments are Leif Hedberg, deputy managing director; Jan Henrik Gladh, director, banking services; Howard White, director, corporate finance; John Ratner, director Eurobonds; and Christopher Walker, director and financial controller.

Barbara S. Thomas

Clark Shift Is Setback for Trade Hawks

But Change Not Expected to Bring A Surge in Business With Russians

By Clyde H. Farnsworth

New York Times Service

WASHINGTON — President Ronald Reagan jolted Washington Oct. 13 by announcing his national security adviser and longtime confidant, William P. Clark, to the suddenly vacant post of interior secretary. The president stressed, and aides confirmed, that his friend and adviser had requested the transfer from his august White House position.

In a less widely noted move the same day, Lawrence J. Brady said he was leaving his post as assistant secretary of commerce for trade administration for personal and financial reasons.

The two events, seemingly so different, were in fact closely linked, Washington insiders say.

Mr. Clark and Mr. Brady have been two of the Reagan administration's hardest of hard-liners on East-West issues, the insiders explained. From their key posts in the White House and Commerce Department, the two hawks — along with their ally, Defense Secretary Caspar W. Weinberger — had fought fiercely in recent months for tighter curbs on trade with the Soviet Union.

Their opposition, also formidable, was led by Secretary of State George P. Shultz and Commerce Secretary Malcolm Baldrige, who had argued vigorously for restraint and consistency in the United States' dealings with the Soviet Union.

The real significance of the shifts by Mr. Clark and Mr. Brady, say those close to the event, is that the administration's hawks on trade have lost their former primacy within the president's councils, signaling changes to come in U.S. trade dealings with the Eastern bloc. Aides said this dilution of hard-line sentiment is further underscored by the appointment of Robert C. McFarlane, a "centrist," as Mr. Clark's successor at the National Security Council.

"It's the pragmatists over the hard-liners," said Edward A. Hewett, a senior fellow at the Brookings Institution. "My guess is that what's going to happen is that the government will play a more neutral role in trade and that we will only prevent the export of those commodities that could endanger national security."

Marshall I. Goldman, associate director of the Russian Research Center at Harvard, also talked of the potential importance of the hard-liners' apparent defeat in Washington: "The hawks have lost a very significant pair of allies" in Mr. Clark and Mr. Brady.

"Now all the opposition to trade with the Soviets is concentrated in the Defense Department," he said. "That makes the businessman's chances" for improving trade with Moscow "that much stronger."

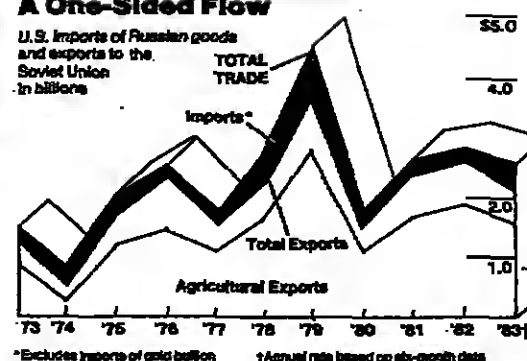
Mr. Goldman, who was a Soviet affairs adviser in the Carter administration, added that Mr. Reagan's measured response to the Soviet Union's shooting down of a South Korean jetliner is another indication of the moderates' new domination of his circle of advisers.

"The president's instinctive reaction after the plane was shot down was probably to bring trade between the two countries to a screeching halt, and I'm really surprised that he didn't," he said. "It shows that he's reacting as a diplomat."

Indeed, it is clear now that the president was under enormous

Trade With Russia

A One-Sided Flow



For Food and Heavy Equipment

A breakdown of 1982 U.S. trade with Russia, in millions

Exports	Imports
Corn	Wheat
Wheat	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers
Tractor-trailers	Tractor-trailers

Source: Department of Commerce

The New York Times

pressure from several quarters, including a faction led by Mr. Clark, to take a tough stance following the plane incident. According to one aide who asked to remain anonymous, Mr. Clark's ally, Mr. Brady, said at a policy meeting soon after the crash that, "We must strike while the iron is hot." The effort was headed off by Mr. Shultz and Mr. Baldrige, however.

Despite the apparent victory won by the moderates, administration officials and outside analysts caution against expecting any sudden increase in trade with Moscow.

"At this point, for political reasons, it just isn't the time," said Mr. Hewett. "What the pragmatists say is: 'At least let's stop the restrictions and let trade take its course.'"

That course so far has proved to be rather unimportant in dollar terms. Despite the intensity of the trade debate in Washington and business's frequent complaints about the U.S. government's use of trade sanctions, the value of American exports to the Soviet Union

(Continued on Page 19, Col. 3)

U.S. Says Prices Increased 0.5% In September

By John M. Berry

Washington Post Service

WASHINGTON — U.S. consumer prices rose 0.5 percent in September and at an annual rate of 5.3 percent during the third quarter, the highest quarterly increase in more than a year, the Labor Department reported Tuesday.

New and used car prices, which rose at 7.6 percent and 23.5 percent rates respectively, were responsible for two-fifths of the increase in the consumer price index for the quarter. Higher housing costs accounted for another 30 percent of the rise, the department said.

For the 12 months ended in September, the index rose 2.9 percent. Most forecasters expect increases over the coming year to be about similar to those in the third quarter.

A few expect a somewhat better performance, predicting that consumer prices will rise in the range of 3 percent to 4 percent.

The September rise, at a 6 percent annual rate, followed two monthly increases of 0.4 percent and a 0.2 percent rise in June.

Food and beverage prices went up 0.4 percent last month, after a 0.2 percent increase in August and declines in each of the previous two months.

The housing component of the index rose 0.5 percent for the month, with the cost of shelter, fuel, other utilities and household furnishings and operations all rising.

Increases in medical-care costs continued to run at a moderate rate compared to the history of the last several years. For the month, medical-care costs rose 0.4 percent. In the last 12 months, such costs were

at an annual rate of only 6.1 percent during the third quarter.

In the year ended in September 1982, medical-care costs rose 11.4 percent while the total index was rising 5 percent. In recent months, the medical-care component and the overall index have been rising at much more similar rates.

Apparel and upkeep prices were unchanged for the month but still rose at an annual rate of 3.9 percent for the quarter. Entertainment prices increased 0.4 percent, while prices for the other goods and services component of the index fell 0.1 percent. The latter component, which accounts for 4.3 percent of the index, rose 10.4 percent over the year.

Apparel and upkeep prices were unchanged for the month but still rose at an annual rate of 3.9 percent for the quarter. Entertainment prices increased 0.4 percent, while prices for the other goods and services component of the index fell 0.1 percent. The latter component, which accounts for 4.3 percent of the index, rose 10.4 percent over the year.

In the highly volatile defense-capital-goods category, new orders showed a slight decline in September, down \$100 million, or 1.7 percent, to \$4.5 billion.

U.S. Orders Fell 0.5% in Month

WASHINGTON — New orders received by U.S. makers for durable goods fell \$300 million, or 0.5 percent, to a seasonally adjusted \$89.5 billion in September, the Commerce Department said Tuesday.

The September decrease follows a revised 2-percent increase in new orders for August. Most of last month's downturn was caused by the transportation industry, which showed a drop of \$3.1 billion, or 14.5 percent, to \$18.5 billion.

In the highly volatile defense-capital-goods category, new orders showed a slight decline in September, down \$100 million, or 1.7 percent, to \$4.5 billion.

U.S. Trade Gap in 1984 May Pass \$100 Billion

United Press International

WASHINGTON — Martin S. Feldstein, chairman of the President's Council of Economic Advisers, told Congress Tuesday that the U.S. trade deficit may soar to more than \$100 billion next year.

Testifying at House hearings, Mr. Feldstein said sharp increases in the value of the dollar in relation to other currencies were the primary reason for rising trade deficits.

Mr. Feldstein said that the trade deficit for this year is likely to be \$60 billion to \$70 billion — or nearly twice the record \$36 billion reached in 1982.

"For next year, it looks more and more like we will have a trade deficit of more than \$100 billion," he said.

He said growing trade deficits are due to a drop in exports and a large increase in imports. "Both of these trends are doing very substantial damage to major segments of American industry," he said.

Mr. Feldstein said one reason that the U.S. dollar has grown

stronger is the "increased attractiveness" of investment in the United States to foreigners.

He said overseas investors have confidence that the dollar would remain strong because the Federal Reserve will not follow an inflationary policy despite large projected budget deficits.

"The high real long-term interest rate in the United States, combined with the sense that dollar investments are relatively safe and that U.S. inflation will remain low, induces investors worldwide to shift in favor of dollar securities," he said.

Looking ahead, Mr. Feldstein said, the real value of the dollar will "eventually decline under the weight of accumulating trade deficits and a growing volume of foreign investments in the United States."

Such a decline, he said, would be "helpful in reducing the very large trade deficits that now hurt many industries" by increasing exports and reducing imports.

"In the absence of a change in



Martin S. Feldstein

economic policy," he said, "no one can be sure how long it will take for the dollar to decline and whether it will proceed smoothly or by a sudden shift induced by a loss of confidence."

Mr. Feldstein said the "main hope" for reducing the value of the U.S. dollar in relation to other currencies and thus stimulating exports was to take steps aimed at "increasing private savings or by reducing the budget deficit."

The economist testified before the domestic monetary policy subcommittee of the House Banking Committee.

Exxon Net Up 21% in Quarter

Compiled by Our Staff From Dispatches

NEW YORK — Exxon Corp., the giant energy company, reported Tuesday that third-quarter profit rose 21 percent on "encouraging signs of recovery" for the petroleum industry. And Standard Oil Co. of California reported a profit increase of nearly 11 percent.

In the quarter, Exxon earned \$1.22 billion, or \$1.41 a share, up from restated earnings of \$1.01 billion, or \$1.17 a share, a year earlier. Revenue fell 7.4 percent to \$23.3 billion from \$25.2 billion.

Analysts had predicted that the major international oil companies would show gains for the third quarter because of a modest rebound in U.S. oil demand and the successful bid in March by the Organization of Petroleum Exporting Countries to put a floor under crumbling world oil prices.

"In this year's third quarter," Exxon's chairman, C.C. Garvin Jr., said, "there were encouraging signs of recovery for the petroleum industry in some areas."

"Consistent with the economic recovery under way in the United States, market conditions here for petroleum and chemical products

improved throughout the first three quarters this year," he added.

Mr. Garvin said petroleum markets overseas strengthened somewhat in the latest quarter but remained depressed despite the decline in crude-oil prices early this year.

Higher worldwide crude-oil production, particularly in the North Sea, contributed to Exxon's rise in third-quarter profit. But U.S. demand for natural gas continued to be weak.

Profit for the nine months rose more than 24 percent, to \$3.36 billion, or \$3.88 a share, from \$2.71 billion, or \$3.11 a share, a year earlier. Revenue fell 9.4 percent, to \$69.9 billion from \$77.1 billion.

In the third quarter, California Standard earned \$509 million, or \$1.49 a share, up from \$459 million, or \$1.34 a share, a year earlier. Revenue fell more than 11 percent to \$7.65 billion from \$8.66 billion.

George Kaller, SoCal's chairman, said refining and marketing margins improved because of more stable market conditions. However, he said that petroleum-product prices declined late in the third quarter. Lower exploration expenses also

(Continued on Page 19, Col. 1)

CURRENCY RATES

Interbank exchange rates for Oct. 25, excluding bank service charges

Currency	Rate	Currency	Rate	Currency	Rate
Australian dollar	1.4800	British pound	1.6000	Swiss franc	1.4800
Belgian franc	36.3600	Canadian dollar	0.7500	West German mark	2.3600
Dutch guilder	2.3600	French franc	6.5500	Japanese yen	160.0000
Italian lira	2036.0000	Spanish peseta	166.6400	U.S. dollar	1.0000
Portuguese escudo	200.4800	South African rand	1.4800		
Swedish krona	4.6600				
Swiss franc	1.4800				
U.S. dollar	1.0000				

\$1 equals 100 cents. (A) Amounts needed to buy one pound. (B) Units of 100 (C) Units of 1,000 (D) Not quoted. N.A.: not available.

INTEREST RATES

Oct. 25

Currency	Rate	Currency	Rate	Currency	Rate
3-month Eurocurrency	5.50%	3-month U.S. Treasury	5.50%	3-month U.S. Treasury	5.50%
6-month Eurocurrency	5.75%	6-month U.S. Treasury	5.75%	6-month U.S. Treasury	5.75%
12-month Eurocurrency	6.00%	12-month U.S. Treasury	6.00%	12-month U.S. Treasury	6.00%

Key Money Rates

Currency	Rate	Currency	Rate	Currency	Rate
3-month Eurocurrency	5.50%	3-month U.S. Treasury	5.50%	3-month U.S. Treasury	5.50%
6-month Eurocurrency	5.75%	6-month U.S. Treasury	5.75%	6-month U.S. Treasury	5.75%
12-month Eurocurrency	6.00%	12-month U.S. Treasury	6.00%	12-month U.S. Treasury	6.00%

Source: Commercial Bank of New York, London, New York.

NYSE Ends Day Higher Despite the World News

United Press International

NEW YORK — Prices rose moderately on the New York Stock Exchange Tuesday, led by automobile issues, but trading was subdued by Wall Street's nervousness about the invasion of Grenada.

U.S. Steel, which reported a better third-quarter profit, and General Motors, which reported a 471-percent earnings gain Monday, bolstered investors' spirits in a session filled with earnings reports and rumors about takeovers.

The Dow Jones industrial average, which had fallen more than 23 points over the previous two weeks, gained 3.46 points, to 1,252.44, despite late selling. It added 0.10 point Monday after being down 15 points at the outset.

The Dow Jones transportation average, which rose 2.99 to a record 593.29 Monday, gave back 2.72 to 590.57.

Advances topped declines 874-688 among the 1,968 issues traded. Volume totaled 82.5 million shares, down from 85.4 million traded Monday.

Brokers reported late profit taking on reports invading U.S. and Caribbean troops ran into resistance from Cuban forces in Grenada, which had been the scene of a bloody coup.

"The market is still showing inherent strength in the Dow Jones industrial stocks," said Harry Villac of Sutor & Co., Palo Alto, California, who contended that a second leg of the bull market has started.

The government reported September consumer prices rose 0.5 percent, up from the 0.4 percent in August, and real earnings after inflation jumped 1.4 percent. Durable goods slipped 0.5 percent.

General Motors, which reported sharply higher third-quarter earnings, was the third most active

NYSE-listed issue, up 1/4 to 79. GM stock hit a record 80 during the day.

Ford rose 1 1/4 to 69 1/4 and Chrysler 1 1/4 to 30 1/4 following news of mid-October sales.

Hewlett-Packard was the most active issue, off 1 1/2 to 35 1/2. Digital Equipment, which plunged 30 1/2 last week, added 1/4 to 68 1/2. DEC's third-quarter earnings totaled 28 cents a share, down from \$1.02 a year earlier.

American Telephone & Telegraph was second on the list, off 1/4 to 60 1/2. IBM was fourth, up 1/4 to 128 1/2.

U.S. Steel, which reported a \$52 million third-quarter profit in contrast to an \$82 million loss a year earlier, added 1/4 to 29. Exxon, which posted third-quarter net of \$1.41 a share, up from \$1.17 a year earlier, fell 1/4 to 39 1/4.

Western Union, which reported third-quarter earnings of 60 cents a share, down from 91 cents a year ago, rose 3/4 to 33 1/2 and Signal Co. lost 1/4 to 33 1/2. Both companies denied merger rumors.

Freight-McMoran, which reported third-quarter earnings of 41 cents a share, down from 49 cents a year earlier, gained 2 1/2 to 22 1/2.

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(Continued from Page 8)

274 PurG p14.40	14	19	32 $\frac{1}{2}$	31 $\frac{1}{2}$	31 $\frac{1}{2}$ + 1/2
274 PurG p14.32	14	83	32	30	31 — 1/2
31 Pottich 1.48	43 19	92	35 $\frac{1}{2}$	34 $\frac{1}{2}$	34 $\frac{1}{2}$ — 1/2

	High	Low	Stock	Div.	Yld. Pct.	100 High	Low	Open	Clos.	Chgs.
	12	11	30 Wafco pf1		12	310	890	890	890	+
	18	16	30 Wafco pf2		12	310	890	890	890	+
	18	16	30 Wafco pf3		12	310	890	890	890	+
	22	20	20 Wafco pf4		12	210	570	570	570	+
	22	20	20 Wafco pf5		12	210	570	570	570	+
	22	20	20 Wafco pf6		12	210	570	570	570	+
	22	20	20 Wafco pf7		12	210	570	570	570	+
	22	20	20 Wafco pf8		12	210	570	570	570	+
	22	20	20 Wafco pf9		12	210	570	570	570	+
	22	20	20 Wafco pf10		12	210	570	570	570	+
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	22	20	20 Wafco pf146		12	210	570	570	570	+
	22	20	20 Wafco pf147		12	210	570	570	570	+
	22	20	20 Wafco pf148		12	210	570	570		

NASDAQ National Market Prices[illegible]

19	4%	4%	4%	+ 1%	NAHns	125	13%	12%	13%	+ 3%	UnSwCL	1,00%	4.5	23%	27%	22%	+ 1%
7202	10%	9%	9%	+ 1%	NwNq 1.36	2462	13%	13	13%	+ 3%	UnSwCL	1,00%	4.5	23%	27%	22%	+ 1%
367	16%	15%	16%	+ 1%	NwNq 1.50	30	36%	36%	36%	+ 1%	USAB	1,00	4.0	21%	6%	6%	+ 1%
149	72%	72%	72%	+ 1%							USAB	1,00	4.0	21%	6%	6%	+ 1%

Dividends		Oct. 25	
Company	Per Amt	Pay	Per Amt
INCREASED			
Douglas Deposit	0	45	1.30
Gannett Co.	1	45	1.30
Northwest Corp.	1	45	1.30
Oregonian Transport	1	45	1.30
Pollock	1	45	1.30
Rogers Group	1	45	1.30
Sears	1	45	1.30
Warner Lambert	1	45	1.30
CASH EXTRA			
Stanford Water	30	13-14	
STOCK			
Praway Inc.	5 PC	13-14	
INITIAL			
Bob Evans Farms	75	11-12	11-12
Central General	75	11-12	11-12
Eventable Bancorp	75	11-12	11-12
STOCK-SPLITS			
Calbra Corp.—3-for-1			
Gannett Co.—3-for-2			
USUAL			
Acme United	25	10-11	10-11
Acme TV Group	25	10-11	10-11
Atlantic Richfield	25	10-11	10-11
Bank of America	25	10-11	10-11
Carnegie Mellon	25	10-11	10-11
Central Station	25	10-11	10-11
Chrysler Corp.	25	10-11	10-11
Consolidated Photo	25	10-11	10-11
General Electric	25	10-11	10-11
Hess Corp.	25	10-11	10-11
International	25	10-11	10-11
Johnson & Johnson	25	10-11	10-11
Kaiser Corp.	25	10-11	10-11
IBM Corp.	25	10-11	10-11
Karnes City Life Ins.	25	10-11	10-11
Kaiser Aluminum	25	10-11	10-11
Liberal Corp.	25	10-11	10-11
Marshall Field	25	10-11	10-11
Martins & Co.	25	10-11	10-11
Merrill Lynch & Co.	25	10-11	10-11
Mutual Shares	25	10-11	10-11
Mutual Shares	25	10-11	10-11
National Security Ins.	25	10-11	10-11
Omaha World	25	10-11	10-11
Philadelphia Elec.	25	10-11	10-11
Rockwell Int'l	25	10-11	10-11
Southern Bell Water	25	10-11	10-11
Stanford Water	25	10-11	10-11
United Control	25	10-11	10-11

A-Annual; H-Monthly; G-Quarterly; Annual.

4.5	428.40	39%	30%	+ 1/4
3.2	9 21 1/2	21%	21%	
	64 9 1/4	9	9	

RyanPa					661	21 1/4	20	21	- 1/4
					8				

AMEX High-Lows Oct. 25		
	NEW HIGHS	
Trisimat	Volley Rite	
	NEW LOWS	
Andrus Jacobs	Billy Inds et	Swanwick n
Bloant A	Castland n	Coastline n
Cochran Res	Choblay n	Swesco
Infiniti Clvs	Infiniti Clvs	Heckco
Kestron n	Kent Pharm	Kent Pharm
Little Bts	Plant Indus	RAI Inds
Smith & S		Stard

SPORTS

Back to Their Roots, the Danes March On

International Herald Tribune

LONDON — If you have the od of soccer in your heart, and wish in your glass, be prepared to join in a Scandinavian evening celebration. Given reasonable odds, the Danes ought to win the European championship in Hungary in Budapest on Wednesday and thus qualify for next year's European championship.

As an Englishman, I am obviously aware that the Danes' qualifying and the elimination of my country, but I cannot shrug off feelings with any display of upper-lip patriotism. I will be lighted if a smaller nation far committed to expression in the sport has made it.

There is almost no excuse for mark to fail, despite its old of stumbling over the most likely hurdles. Yet this time even Danes believe in themselves; and still has a small chance, a swift midfielder Jesper Olsen, a only a small chance.

ly that he means the Hungarians in have improved out of all reason from the wretchedly inadequate team that lost at home to a fabled fortnight ago. It is, as an so wittily says, a small, not, although Hungary has and its wayward genius, Andrei Torocskai.

man, Gyorgy Mezey, "is of the few Hungarians who can well against the type of soccer mark plays." Never mind that a month ago saw fit to such a talent; how is Torocskai

to cure the ineptitude of Hungary's defense, or the lack of imagination from a midfield that on Wednesday will not include Tibor Nyilasi, for so long the orchestrator of last Magyar games?

And what is one man, one occasional genius indeed, against a team befitting of individualist flair?

There is, for a start, Olsen himself. One of a dozen Danes in Dutch professional soccer and of the 50 who are scattered around the continent in major European leagues, Olsen is a slight and slender figure but one gifted with such blinding pace, such instinctive awareness, that better defenders than the Hungarians often cannot find, much less stop him.

At Ajax of Amsterdam in previous seasons, the 22-year-old Olsen blossomed best when his "minder," the 25-year-old Soren Lerby, was there to play a duet. Lerby has a magic left foot, but is a man of prodigious power and strength.

Not only Olsen, but also the craftiest Danish pinner of them all, Allan Simonsen, benefits from Lerby (who, incidentally, has now replaced Paul Breitner at Bayern Munich). Simonsen became quite simply one of the finest forwards European soccer has produced. He was coached by the late Henne Weisweiler at Borussia Munchengladbach, he became a match-winner in West Germany and at Barcelona.

There he signed with Juventus, and plays on loan for Lazio of Rome while Juventus perseveres with Michel Platini and Zbigniew Boniek, its two permitted foreigners.

We haven't mentioned the style by which these individuals battle opponents, haven't spoken of goal-scoring like Kenneth Brylle and

lona and, after an appalling degree of mistreatment there and a farcically miscast couple of months with the ailing English second-division club Charlton Athletic, he returned home to semiretirement with his first love, Vejle.

We should all be so devastatingly effective, in our dotage. Simonsen has lately withdrawn from the front-running role that has so far reaped 20 goals in 39 internationals to apply his worldly knowledge as a creator from midfield. Weisweiler would love to have been around now to see how his pupil matures.

But why should Simonsen accept a role less potent than the playmaking for which Weisweiler schooled him? Because the Danes have found fresher legs to do all that running. Their attack is at its best with the rangy Loken Preben Elkjaer stretching and perplexing opponents while teenager Michael Laudrup helps himself to goals.

Laudrup, already the scorer of 10 goals in 7 internationals, has the same clinical goal-scorer's eye that made Jimmy Greaves and Denis Law and Gerd Muller the kings of their eras.

For more than two years, wealthy clubs like Barcelona and Feyenoord pursued Laudrup through his school days. Liverpool announced he was their last summer, and he was — until the English club's manager, Bob Paisley, the great-grandson of Laudrup's father Finn, himself a former international, recruited the boy to Italy.

There he signed with Juventus, and plays on loan for Lazio of Rome while Juventus perseveres with Michel Platini and Zbigniew Boniek, its two permitted foreigners.

We haven't mentioned the style by which these individuals battle opponents, haven't spoken of goal-scoring like Kenneth Brylle and

Lars Bastrop, who would be first choice in most nations. We haven't considered Denmark's defense because the most seldom arises.

And if the presence of so many talented individuals — harnessed at last into a team by the experienced Sepp Piontek — makes you feel slightly dizzy, then imagine the apprehension in Hungary.

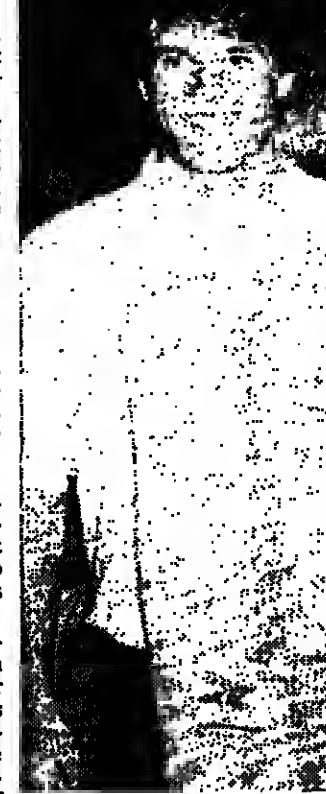
But where does all this ability come from? I would go all the way back to Nils Middelboe, born in 1887, a tall, graceful wing/half who represented Denmark in soccer in the Olympics of 1908, 1912 and 1920 and who became the forerunner to the continuing line of Danish exports by playing for and captaining the English side Chelsea between 1913 and 1922.

Middelboe's phenomenal enthusiasm for the sport as it was conceived — as a game of enjoyment and creativity — brought him into contact with the greatest thinkers the game has produced.

He exchanged views with England's Walter Winterbottom, with Brazil's Vicente Feola, with Sir Matt Busby and the great players of the fifties and sixties. And, dismayed at a trend that dissuaded the players from thinking for themselves, "fearing that the craze of exaggerated defensive methods which dull the game and ruin attack," might spread to Denmark, "Middelboe produced a little brown book.

He called it "Common Sense About Soccer." "I have never read a better or more influential book on sport. It is there in that book to teach the players their soccer development and that speed, strength and endurance, although fine qualities, will never capture an audience as readily as skill with the ball, passing, control and intuition.

In 1970, at the age of 83, Middle-



Michael Laudrup

boe made a final gesture to his second soccer home by arranging for 2,500 copies of the book to be distributed to English schools.

The old master is, of course, gone now. His message was offered equally in his homeland and in the country of his finest sporting hours. Denmark seems to have learned more from it than England; because the gospel is worth spreading I would be happy to see the Danes in France next year at England's expense.

NHL's Rangers: Surprising Rise

By Dave Anderson

New York Times Service

NEW YORK — In their private Octoberfest, the New York Rangers suddenly are atop the National Hockey League with a 9-1 record. Unaccustomed as they are to propounding, they are streaking seven months into soon.

The time to go 9-1 is at the end of the playoffs, not at the start of the regular season. If the Rangers were to finish the playoffs with a 9-1 streak, they would win the Stanley Cup that has eluded them since 1940.

But after more than four decades of frustration, it's almost as if this were April and May instead of October, especially after the Rangers' weekend sweep of the Stanley Cup champion New York Islanders.

In a theatrical sense, the Rangers' timing has been ideal. With New York's Jets and the Giants struggling in the National Football League, with the World Series and the New York Marathon over, with the Knicks and the Nets awaiting the basketball season, the Rangers have center stage all to themselves.

"The way the city and the media are reacting," says Barry Beck, the Ranger captain, "it seems like it's April already."

Realists know better. Herb Brooks, the Ranger coach, talked about "the big week we had, but there's still 70 games to go."

And then the Rangers still would have to win another 15 games in the playoffs in order to end the Islanders' four-year reign.

But after 10 games, the Rangers appear to be a much improved team. Bigger, faster, deeper. Now they must try to sustain that improvement over the season and through the playoffs. One advantage is their quick start. In other words, a slow start often had them skating uphill, sometimes for months, to attain the 500 mark. This season they're already eight games over 500, already 10 points ahead of the Islanders, with three home-ice games this week, against Winnipeg, Toronto and Edmonton, before leaving on a four-game trip.

In addition to the return of the defenseman Ron Greshiner with a healthy back, three moves by Brooks and Craig Patrick, the general manager, have turned the Rangers upward from the team that finished fourth in the Patrick Division last season with a 35-35-10 record before losing to the Islanders, four games to three, in the cup quarterfinals.

One of the trades that acquired a pair of 200-pound wings, Mark Osborne and Mike Blaisdell, and 6-foot-5-inch, 225-pound defenseman Willie Huber from the Detroit Red Wings for Ron Duguay, Ed Johnston and Eddie Mio.

Two: importing two swift 21-

year-old Swedish rookie wings, Jan Eriksson and Peter Sundstrom.

Three: the signing (at a reported salary of \$175,000) of center Pierre Larouche, a free agent without compensation who was unwanted by the Hartford Whalers but who is now leading the Rangers with 7 goals and 13 points.

At the time of the trade with the Red Wings, some Ranger followers bemoaned Duguay's departure but, in a sense, he wrote his own airline ticket in the form of a check.

Duguay annoyed Brooks by often being late for practice last season, prompting a \$50 fine each time. Near the end of the season, he was late again.

When his teammates joked about his repeated \$50 fines, he asked how many more practices remained.

Told there were four left, Duguay wrote a \$200 check.

Now he can be late for Red Wing practices.

Over the long season, and especially in the playoffs, the Ranger weakness might be their goaltenders, Glen Hanlon and Steve Weeks. But with better defensemen and better checking forwards, the Rangers also lead the league with a goals-against average of only 2.6.

"I'm finally feeling like myself," says Hanlon, who underwent knee surgery in 1980. "Herb Brooks has really been on the goalkeepers to work hard in practice, to concentrate."

Another factor is that the team no longer is waiting for John Davidson to return as its goaltender. After several years of back and knee injuries, he is now a TV analyst. But he remains the symbol of the Rangers' 1979 Stanley Cup quest, ended by the Montreal Canadiens in a five-game final. Larouche and defenseman Rick Chartraw, the only current Rangers to have their names engraved on the huge silver trophy, were on that Montreal team.

"This is a better Ranger team than that 1979 team," Larouche says. "This team has more speed, its defense is better and the goaltending has been phenomenal."

After the Rangers' 3-2 victory Saturday night, a Stanley Cup atmosphere permeated Madison Square Garden for Sunday night's rematch. When the Rangers skated onto the ice before the opening faceoff, they were greeted with a

standing ovation. John Ziegler, the NHL president, was there, as he always is when the Stanley Cup can be won.

Entering the final four minutes Sunday, the Rangers had opened a 5-2 lead. But the Islanders returned them and their loyalists to reality with three goals in a span of 27 seconds, an islander record that created the first regular-season overtime at the Garden since 1942.

But the Rangers' 6-5 victory completed a weekend home-and-home sweep of the Islanders for only the second time in history (they also did it on Dec. 9, 1972, early in the Islanders' first season as an expansion team).

In the roar for Sundstrom's sudden-death goal after 1 minute and 13 seconds, the Rangers pounded and pawed each other as if the cup had been won.

But the Islanders quickly skated off the ice, leaving their opponents without so much as a backward glance. The four-time champions know that ceremonial Stanley Cup handshakes don't occur in October.

Transition

BASEBALL

DETROIT — Gold the contracts of Larry Pashnick, pitcher, and Jeff Kautsky, outfielder, to the American Association.

MILWAUKEE — Acquired Rich Buchholz, pitcher, from the Chicago Cubs in exchange for the Cubs' left fielder, Steve Loke, catcher, to the Cubs' left fielder, the Brewers assigned Buchholz to be Vancouver of the Pacific Coast League.

NEW YORK — Added Jose Rijo, pitcher, and Sam Jolley and Matt Winters, outfielders, to the major-league roster.

KANSAS CITY — Released Steve Horvath, forward, and Dave Suttis, guard.

LOS ANGELES — Released Ron Carter, guard.

MILWAUKEE — Picked Mark Patkewitz and Billy Vorster on waivers.

PHOENIX — Named Richard L. Stock chairman of the board, David P.H. president, and Jerry Coleman executive vice-president, in addition to his duties as general manager.

PORTLAND — Picked Tim Dunham, forward, on waivers.

NEW JERSEY (1)

DETROIT — Acquired Andre St. Laurent, center, from Pittsburgh for future consideration.

WINNIPEG — Announced that Tim Wothell, forward, will be released indefinitely with a pulled hamstring. Called up Mo Matheson, defenseman, from Sherbrooke of the American Hockey League.

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United Press International

More Lift Records Reported Set

Competing at the European and World Weightlifting championships Monday night in Moscow, Marek Sewerny of Poland (above) snatched a world-record 303.6 pounds (138 kilos) in the 132-pound class. Tass reported. Cuban Daniel Nunez's previous record of 302.5 pounds was equaled Monday by Russian Yuriy Sarkisyan en route to a record total of 687. Stefan Purvov of Bulgaria, managing 396 pounds in the jerk, became his first athlete ever to lift three times his own weight, Tass said.

NFL Standings

American Conference

Team	W	L	T	Pct.	PF	PA
Buffalo	8	3	0	.727	161	101
Atlanta	4	4	0	.500	144	173
Baltimore	4	4	0	.500	184	145
New England	3	5	0	.375	167	172
N.Y. Jets	3	5	0	.375	167	172

Central

Team	W	L	T	Pct.	PF	PA
Pittsburgh	6	2	0	.750	210	153
Cleveland	4	4	0	.500	154	167
Cincinnati	2	6	0	.250	124	167
Houston	0	8	0	.000	130	221

West

Team	W	L	T	Pct.	PF	PA
L.A. Raiders	4	4	0	.500	221	170
Denver	3	5	0	.375	124	173
Seattle	4	4	0	.500	185	185
Kansas City	4	4	0	.500	138	173
San Diego	3	5	0	.375	197	228

National Conference

Team	W	L	T	Pct.	PF	PA
Dallas	7	1	0	.875	253	175
Washington	4	4	0	.500	197	146
Philadelphia	4	4	0	.500	146	174
N.Y. Giants	2	5	1	.286	146	174
St. Louis	2	5	1	.286	146	174

Central

Team	W	L	T	Pct.	PF	PA
Minnesota	6	2	0	.750	184	184
Green Bay	4	4	0	.500	224	223
Chicago	2	6	0	.250	164	167
Indianapolis	3	5	0	.375	153	146
Tampa Bay	0	8	0	.000	128	210

West

Team	W	L	T	Pct.	PF	PA
San Francisco 49ers	2	6	0	.250	146	157
L.A. Rams	3	5	0	.375	170	170
New Orleans	3	5	0	.375	172	144
Atlanta	3	5	0	.375	172	144

Monday's Result

Team	W	L	T	Pct.	PF	PA
St. Louis 24, N.Y. Giants 20	3	5	0	.375	172	144

DETROIT OF CHICAGO

Team	W	L	T	Pct.	PF	PA
Minnesota at Atlanta	7	1	0	.875	253	175
New Orleans at Buffalo	3	5	0	.375	172	144
Tampa Bay at Pittsburgh	0	8	0	.000	128	210
Baltimore at Philadelphia	4	4	0	.500	184	145
Dallas at N.Y. Giants	2	5	1	.286	146	174
L.A. Rams at Miami	3	5	0	.375	170	170
Houston at Cleveland	0	8	0	.000	130	221
San Diego at Denver	3	5	0	.375	197	228
N.Y. Jets at San Francisco	3	5	0	.375	167	172
Green Bay at Cincinnati	4	4	0	.500	154	167
Washington at St. Louis	4	4	0	.500	197	146
Philadelphia at San Diego	4	4	0	.500	146	174

Missed Field Goals

Let Giants Salvage Tie With Cardinals

United Press International

ST. LOUIS — Neil O'Donoghue of St. Louis, whose 22-yard field goal with 54 seconds remaining in regulation play forced an extra period, missed three attempts in overtime, enabling the New York Giants to salvage a 20-20 National Football League tie against the Cardinals here Monday night.

O'Donoghue was short and wide to the left on a 45-yard attempt at 6:10 of overtime, wide right on a 20-yarder with 1:03 left to play and wide right on a 43-yarder with 22 remaining.

The game-tying field goal came after a pass-interference call had given St. Louis a first down at the New York 4-yard line.

Quarterback Neil Lomax then passed to a wide-open Roy Green in the end zone, but the Cardinals' top receiver dropped the ball. On second down, Lomax flipped a pass to Willard Harrell, open in the right flat, but the ball went through the running back's hands. A third-down incompleteness brought an O'Donoghue.

Lomax hit 16 of 33 passes for 203 yards, while Giant quarterback Jeff Rutledge finished 21-of-46 for 208. The game's top rusher was Stump Mitchell of the Cardinals, who carried 24 times for 108 yards.

College Football Polls

The Associated Press

NEW YORK — The top 20 teams in the Associated Press college football poll, with first-place votes and records in parentheses:

Rank	Team	Record
1	Nebraska (8-0)	8-0
2	Texas (6-0)	6-0
3	North Carolina	6-0
4	Auburn	6-0
5	Florida	6-0
6	Alabama	6-0
7	Michigan (7-1)	7-1
8	Michigan	6-0
9	Illinois	6-0
10	Washington	6-0
11	West Virginia	6-0
12	West Virginia	6-0
13	Alabama	6-0
14	Oklahoma	5-0
15	Brigham Young	5-0
16	Brigham Young	5-0
17	Brigham Young	5-0
18	Brigham Young	5-0
19	Brigham Young	5-0
20	Brigham Young	5-0

United Press International

NEW YORK — The United Press International board of coaches has selected the following as the nation's top 20 college football teams, with first-place votes and records in parentheses:

Rank	Team	Record
1	Nebraska (8-0)	8-0
2	Texas (6-0)	6-0
3	North Carolina	6-0
4	Florida	6-0
5	Alabama	6-0
6	Michigan (7-1)	7-1
7	Michigan	6-0
8	Illinois	6-0
9	Washington	6-0
10	West Virginia	6-0
11	West Virginia	6-0
12	Alabama	6-0
13	Oklahoma	5-0
14	Brigham Young	5-0
15	Brigham Young	5-0
16	Brigham Young	5-0
17	Brigham Young	5-0
18	Brigham Young	5-0
19	Brigham Young	5-0
20	Brigham Young	5-0

On NCAA probation, and therefore ineligible for top 20 consideration by UPI, are Clemson, Southern California, Arizona, Wichita St. and Southern Mississippi.

China Has Early Lead

In Gymnastics Tourney

The Associated Press

BUDAPEST — China won the top two spots in men's team compulsory competition Monday at the World Gymnastics Championships and took the lead over the defending Soviet Union.

China compiled 295.25 points in the first day of the weeklong event while the Soviet Union had 294.40. Japan was third at 293.75 and the United States fourth at 291.90.

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